



ABC4Trust Reference Implementation

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Summit Event

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Brussels



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Agenda



- Introduction
- Overview
 - Components
 - Interfaces
 - Data Flow
- Demo application

At a Glance



- Implements the ABC4Trust architecture
- Written in Java
 - Most source code is available on GitHub
 - Uses maven as build tool
- Features
 - Designed for a typical desktop/server setup
 - Supports hardware and software smart cards
 - User interaction via a User Service and Browser Plugin

Central Components



- core-abce
 - abc4trust-xml
 - Schema definitions for presentation policies, credential specifications, etc.
 - abce-interfaces
 - Interfaces for abce-components
 - abce-components
 - Implementation of core components
 - abce-services
 - REST API for abce-components
- java-ui
 - User interface

- Java API for the ABC Engine
- RESTful web services
 - Mainly for demonstration and integration testing
 - Set up the ABC Engine
 - Import parameters from files
 - E.g credential specifications and issuance policies
 - Perform simple cross validations
 - E.g. does there exist issuer parameters for the UID in the issuance policy?
 - Export parameters if needed
 - E.g. issuer parameters for other components

- An issuance/presentation between a User and Issuer/Verifier involves communication between the following components:
 - Issuer / Verifier Application
 - Browser Plugin
 - User Service
 - Identity Selector

Data Flow 1/8

A screenshot of the ABC4 TRUST End User Application @ Issuer interface. The header is green with the ABC4 TRUST logo and the text 'End User Application @ Issuer'. Below the header is a 'Home' button. The main content area has the text 'Select Credentials to Issue and press 'Start'' and a status message 'Issue OK: Credential obtained...SUCCESS - status 200'. Below this is a table with columns 'Select', 'Credential Type', and 'UUID'.

Select	Credential Type	UUID
<input checked="" type="checkbox"/>	CREDITCARD_AAMEX	cfd37708-f660-4aaa-8db3-8ede1cc45672
<input checked="" type="checkbox"/>	IDCARD	bbf1cb07-bc9e-4931-990d-13eda13a9bb7

Cancel Start



A screenshot of a browser notification for the ABC4Trust UI Plugin. The notification is blue and white. It shows the plugin name 'ABC4Trust UI Plugin 1.0.50-SNAPSHOT' and a link to 'More'. Below the notification are two buttons: 'Get Add-ons' and 'Extensions'.

- The application notifies the Browser Plugin via JavaScript about the action to take, policies and endpoints.

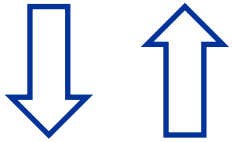
Data Flow 2/8



Get Add-ons

ABC4Trust UI Plugin 1.0.50-SNAPSHOT
ABC4Trust UI Plugin. [More](#)

Extensions



ABC4 TRUST End User Application @ Issuer

Home

Select Credentials to Issue and press 'Start'

Issue OK: Credential obtained... SUCCESS - status 200

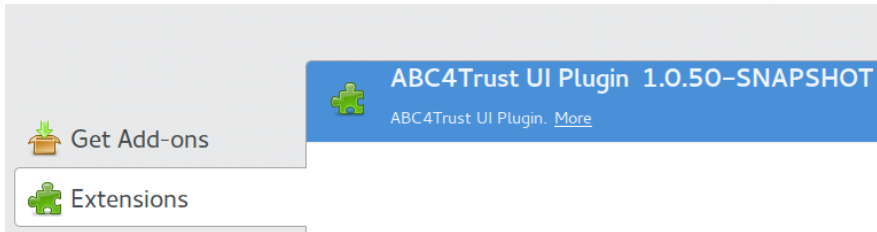
Select	Credential Type	UUID
<input checked="" type="checkbox"/>	CREDITCARD_AAMEX	cfd37708-f660-4aaa-8db3-8ede1cc45672
<input checked="" type="checkbox"/>	IDCARD	bbf1cb07-bc9e-4931-990d-13eda13a9bb7

Cancel Start

```
File Edit View Search Terminal Help
onAuthorities
INFO: AbstractHelper addRevocationAuthorities : []
Jan 19, 2015 2:40:44 PM eu.abc4trust.ri.servicehelper.user.UserHelper initInstance
INFO: UserHelper.initInstance : DONE
- Secret NOT in CredentialManager - try to create!
- Secret Generated! and stored in CredentialManager!
INFO : SoftwareSmartcard - initialized as SecretBased Smartcard : eu.abc4trust.s
smartcard.SecretBasedSmartcard@73a4eb2d
Jan 19, 2015 2:40:44 PM com.sun.jersey.api.core.PackagesResourceConfig init
INFO: Scanning for root resource and provider classes in the packages:
eu.abc4trust.ui.idselectservice
Jan 19, 2015 2:40:44 PM com.sun.jersey.api.core.ScanningResourceConfig logClasses
INFO: Root resource classes found:
class eu.abc4trust.ui.idselectservice.UserService
Jan 19, 2015 2:40:44 PM com.sun.jersey.api.core.ScanningResourceConfig init
INFO: No provider classes found.
Jan 19, 2015 2:40:44 PM com.sun.jersey.server.impl.application.WebApplicationImpl
l_initiate
INFO: Initiating Jersey application, version 'Jersey: 1.10 11/02/2011 03:53 PM'
2015-01-19 14:40:46.717:INFO::Started SelectChannelConnector@0.0.0.0:9300
2015-01-19 14:40:46.718:INFO::Started SelectChannelConnector@0.0.0.0:9093
```

- The Browser Plugin retrieves the resources and passes them to the User Service.

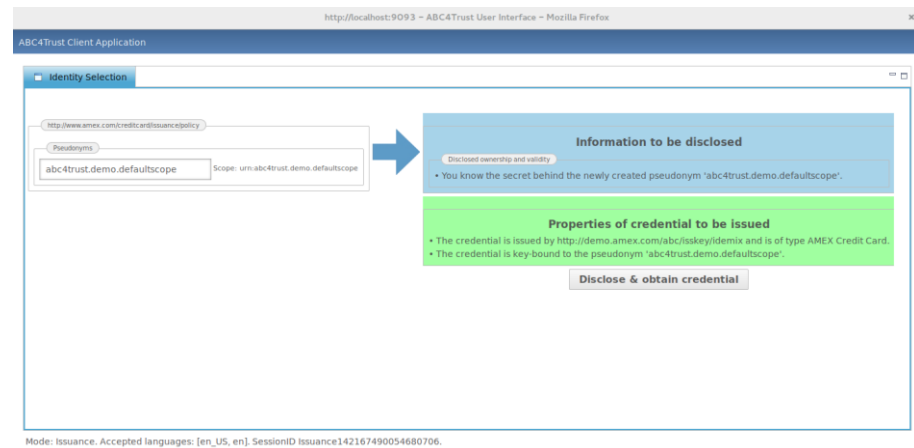
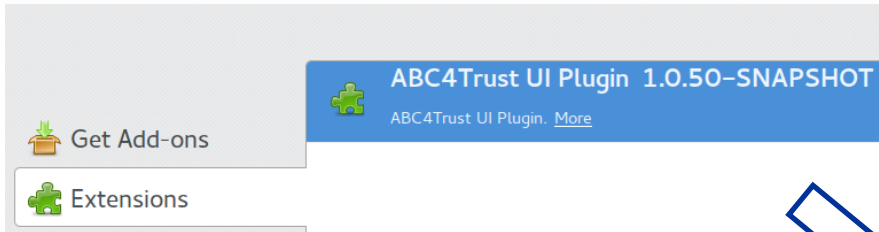
Data Flow 3/8



```
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```

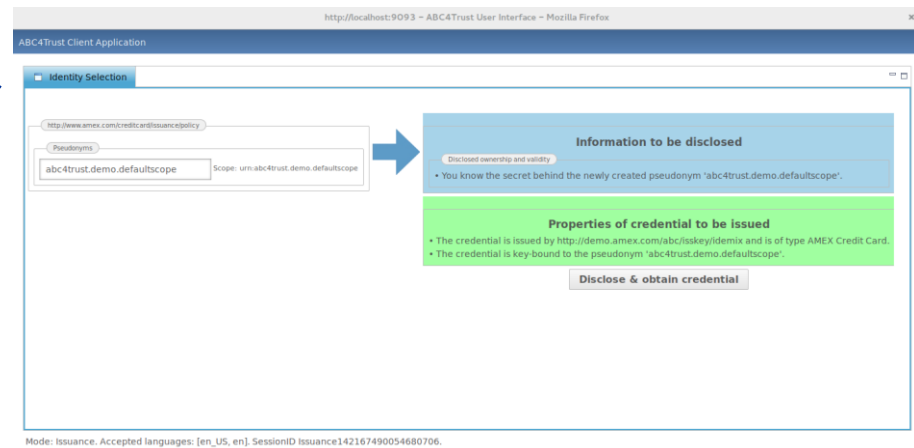
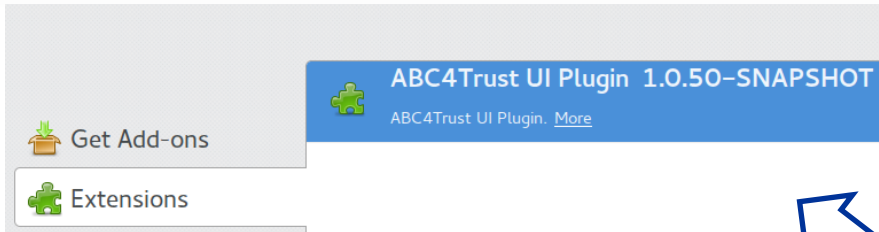
- The User Service computes the possible ways to satisfy the policy and returns the list to the Browser Plugin.

Data Flow 4/8



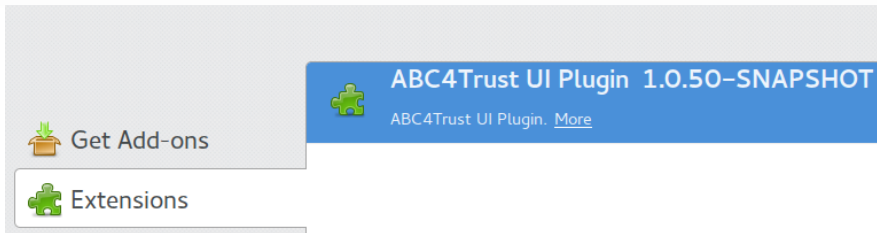
- The Browser Plugin passes this information to the Identity Selector which presents the choices to the user.

Data Flow 5/8



- Once the user has made a selection, the choice is returned to the Browser Plugin.

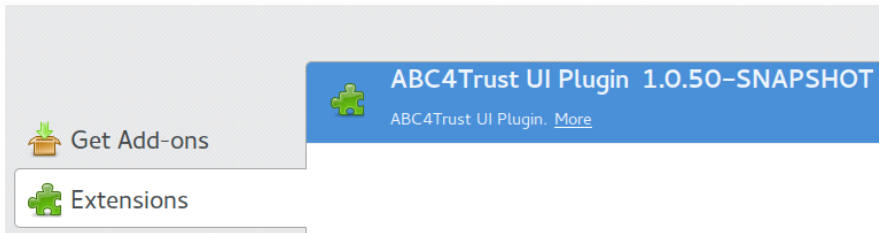
Data Flow 6/8



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2015-01-19 14:40:46.718:INFO::Started SelectChannelConnector@0.0.0.0:9093
```

- The Browser Plugin passes the choice to the User Service.

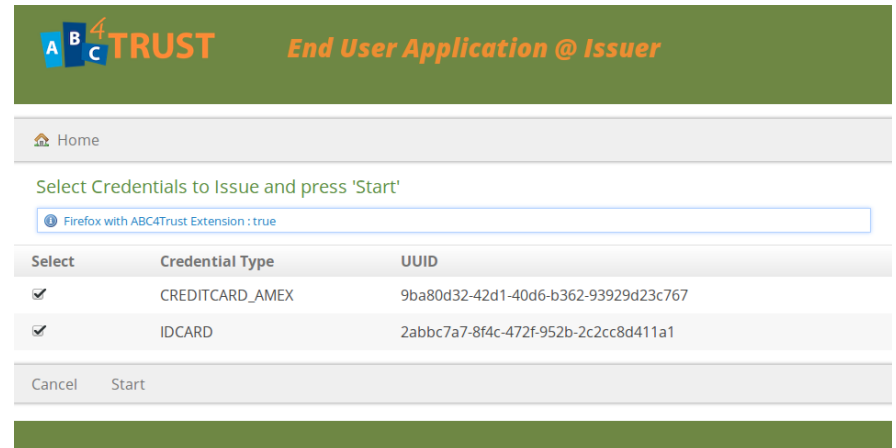
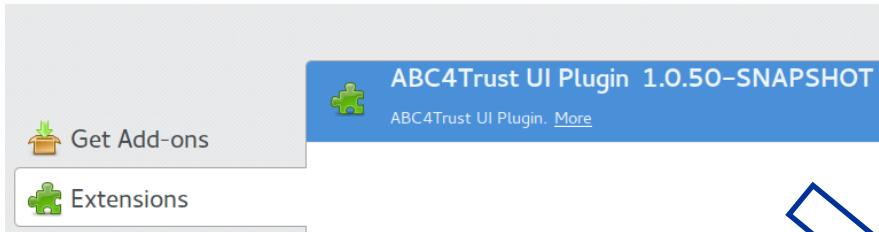
Data Flow 7/8



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smartcard.SecretBasedSmartcard@73a4eb2d
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Jan 19, 2015 2:40:44 PM com.sun.jersey.server.impl.application.WebApplicationImpl
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2015-01-19 14:40:46.718:INFO::Started SelectChannelConnector@0.0.0:9093
```

- The User Service computes an ABC protocol message (issuance message) which is sent to the Browser Plugin.

Data Flow 8/8



- The Browser Plugin sends this protocol message to the application, which can then act accordingly.

Building an Application



- Setup
 1. Define credential specification and policies
 2. Setup system parameters
 3. Setup issuer parameters
 4. *Setup inspector / revocation authority parameters*
 5. Distribute public parameters
- Runtime
 - Call the ABC Engine interfaces (REST or Java)
 - Keep track of sessions

Demo Application Flow



- Hotel booking
 - User gets credentials
 - User books a hotel room
 - User does not show up
 - Hotel asks inspector for gets credit card number
 - Inspector reveals credit card number
 - Hotel collects payment
- Age verification
 - User proves that he is over a certain age

Demo

HOTEL BOOKING

Hotel Booking

ISSUER

Issuer Demo Application



InspectionRequest ... CredentialIssuance ... Booking List Create Booking Compare Birthday ...

uer-application/person/create

Google

ABC4 TRUST Issuer Application

Home Person List

Create Person

Create

Person Id (autogenerated)

Firstname *

Lastname *

Gender *

Birthday *

PIN (autogenerated)


Issuer

Demo Application



InspectionRequest ... x CredentialIssuance ... x Booking List x Create Booking x Compare Birthday ... x

issuer-application/person/index



Issuer Application

[Home](#) [New Person](#)

Person List

Person Id	Firstname	Lastname	Gender	Birthday	PIN
1.000.000.000	John	Doe	M	1976-07-21	14776
1.000.000.001	Alice	Von Nextdoor	F	1981-02-03	53281

Issuer

Demo Application



The screenshot shows a web browser window with several tabs: 'InspectionRequest ...', 'CredentialIssuance ...', 'Booking List', 'Create Booking', and 'Compare Birthday ...'. The address bar shows 'r-application/person/show/1' and the search engine is 'Google'. The page header features the 'ABC4 TRUST' logo and the title 'Issuer Application'. Below the header is a navigation menu with 'Home' and 'Person List'. The main content area displays the details for a person:

Person Id	1,000,000,000
Firstname	John
Lastname	Doe
Gender	M
Birthday	1976-07-21
PIN	14776

Below the details are four buttons for creating credentials:

CreditCardCredentials	Create
IdCardCredentials	Create
PassportCredential	Create
StudentCardCredentials	Create

Issuer Demo Application



InspectionRequest ... x CredentialIssuance ... x Booking List x Create Booking x Compare Birthday ... x

application/person/createCreditCardCredential/1

ABC4 TRUST Issuer Application

Home Person List

Adding Credential

Person Id 1,000,000,000
Firstname John
Lastname Doe
Gender M
Birthday 1976-07-21
PIN 14776

New CreditCardCredential Create Skip

Number (autogenerated)

Issuer * AMEX

Holder * John Doe

Expire * 5 August 2016

Issuer

Demo Application



InspectionRequest ... CredentialIssuance ... Booking List Create Booking Compare Birthday ...

er-application/person/show/1

Person Id 1,000,000,000
Firstname John
Lastname Doe
Gender M
Birthday 1976-07-21
PIN 14776

CreditCardCredentials Create

Number	Issuer	Holder	Expire	Issued	Revoked
123.400.000.001	AMEX	John Doe	2016-08-05	<input type="checkbox"/>	<input type="checkbox"/>
123.400.000.002	VISA_BEST_BANK	John Doe	2016-08-05	<input type="checkbox"/>	<input type="checkbox"/>

IdCardCredentials Create

Person Identifier	Firstname	Lastname	Birthday	Issued	Revoked
1.000.000.000	John	Doe	1976-07-21	<input type="checkbox"/>	<input type="checkbox"/>

PassportCredential Create

Number	Country	Firstname	Lastname	Birthday	Expire	Gender	Issued	Revoked
1.000.000.000	CH	John	Doe	1976-07-21	2024-08-05	M	<input type="checkbox"/>	<input type="checkbox"/>

StudentCardCredentials Create

Matriculation Number	School	Name	Birthday	Issued	Revoked
4.000.000.000	ETH	John Doe	1976-07-21	<input type="checkbox"/>	<input type="checkbox"/>

Issuer Demo Application



The screenshot shows a web browser window with several tabs: 'InspectionRequest ...', 'CredentialIssuance ...', 'Booking List', 'Create Booking', and 'Compare Birthday ...'. The address bar shows the URL 'r-application/creditCardCredential/show/3' and the search engine is set to Google.

The application header is teal and contains the ABC4 TRUST logo and the text 'Issuer Application'. Below the header is a navigation bar with links for 'Home', 'Person List', and 'Show Person'. The main content area is titled 'Show CreditCardCredential' and displays the following information:

Number	123,400,000,001
Holder	John Doe
Expire	2016-08-05 00:00:00 CEST
Issuer	AMEX
Issued	False
Revoked	False
Revocation Handle	

At the bottom of the content area is a 'Back' button.

Hotel Booking

USER @ ISSUER

User @ Issuer


Demo Application



InspectionRequest ... x CredentialIssuance ... x Booking List x Create Booking x Compare Birthday ... x

r-application/credentialIssuance/index

Google



End User Application @ Issuer

Home

Authenticate with PIN to start Issuance of Credentials

Person Identifier *

PIN *

User @ Issuer

Demo Application



InspectionRequest ... x CredentialIssuance List x Booking List x Show Booking x Show Birthday x

r-application/credentialIssuance/authenticate

End User Application @ Issuer

Home

Select Credentials to Issue and press 'Start'

Select	Credential Type	UUID
<input checked="" type="checkbox"/>	CREDITCARD_AAMEX	ca4bdf46-b11f-401d-a309-4d6182ef2d72
<input checked="" type="checkbox"/>	CREDITCARD_VISA_BEST_BANK	3c5c8473-df1f-43b7-b3d4-51b4c8cdc99f
<input checked="" type="checkbox"/>	IDCARD	4fed625f-9437-4dd3-8512-77c2108af539
<input checked="" type="checkbox"/>	PASSPORT_CH	f9fd1fbc-0804-48da-b596-81cdc3ede4b0
<input checked="" type="checkbox"/>	STUDENTCARD	94109e05-1501-4bde-8099-2810fd302f18

Cancel

User @ Issuer

Demo Application



The screenshot shows a web browser window with several tabs: 'InspectionRequest ...', 'CredentialIssuance List', 'Booking List', 'Show Booking', and 'Show Birthday'. The address bar shows the URL 'er-application/credentialIssuance/authenticate'. The page header includes the 'ABC4 TRUST' logo and the text 'End User Application @ Issuer'. Below the header, there is a 'Home' link and a main heading 'Select Credentials to Issue and press 'Start''. A status bar indicates 'Running issuance of CREDITCARD_AMEX - UUID : ca4bdf46-b11f-401d-a309-4d6182ef2d72 : 1/5'. A table lists credential types with checkboxes in the 'Select' column and UUIDs in the right column. A modal dialog titled 'Authenticate Password' is overlaid on the table, prompting the user to 'Enter current PIN:' with a text input field and 'OK' and 'Annuler' buttons.

Select	Credential Type	UUID
<input checked="" type="checkbox"/>	CREDITCARD_AMEX	ca4bdf46-b11f-401d-a309-4d6182ef2d72
<input checked="" type="checkbox"/>	CREDITCARD_VISA	ca4bdf46-b11f-401d-a309-51b4c8cdc99f
<input checked="" type="checkbox"/>	IDCARD	ca4bdf46-b11f-401d-a309-277c2108af539
<input checked="" type="checkbox"/>	PASSPORT_CH	ca4bdf46-b11f-401d-a309-f9fd1fbc-0804-48da-b596-81cdc3ede4b0
<input checked="" type="checkbox"/>	STUDENTCARD	ca4bdf46-b11f-401d-a309-94109e05-1501-4bde-8099-2810fd302f18

User @ Issuer

Demo Application



A screenshot of a web browser displaying the ABC4Trust Client Application. The browser's address bar shows 'http://localhost:9093 - ABC4Trust User Interface - Mozilla Firefox'. The application has a blue header with the text 'ABC4Trust Client Application'. Below the header is a tab labeled 'Identity Selection'. The main content area shows a white box on the left containing a URL 'http://www.amex.com/creditcard/issuance/policy' and the text 'This policy has no description.' A large blue arrow points from this box to a green box on the right. The green box has the title 'Properties of credential to be issued' and a bullet point: '• The credential is issued by http://www.amex.com/abc/isskey/idemix and is of type AMEX Credit Car'. Below the green box is a button labeled 'Obtain credential'. At the bottom of the application window, there is a footer with the text: 'Mode: Issuance. Accepted languages: [en, da, en_US]. SessionID Issuance140725062357721855.'

User @ Issuer

Demo Application

A screenshot of a web browser displaying the ABC4Trust Client Application. The browser tabs include 'CredentialIssuance ...', 'Booking List', 'Create Booking', and 'Compare Birthday ...'. The address bar shows 'http://localhost:9093 - ABC4Trust User Interface - Mozilla Firefox'. The application interface has a blue header 'ABC4Trust Client Application'. Below the header is a 'Credential Repository' section with a search bar and a list of credential types: AMEX Credit Card, Visa Credit Card, ID Card, Passport (highlighted in grey), and Student ID. Below this is a 'Credential Attributes' section with a table of details for a Swiss Passport.

Issuer:	Swiss Passport (http://admin.ch/passport/issuancekey_v1.0/idemix)
Revoked by Issuer:	The credential is not revocable.
Name:	John
Lastname:	Doe
Birthday:	21-07-1976
Passport Number:	1000000000
Expiration Date:	05-08-2024
Issued By:	Proper Authority in CH

Hotel Booking

USER @ VERIFIER

User @ Verifier

Demo Application



InspectionRequest ... x CredentialIssuance ... x Booking List x Create Booking x Show Birthday x

ier-application/booking/index Google

ABC⁴ TRUST *End User Application @ Verifier*

Home

Create Booking

Room Category * NORMAL

Arrival Date * 9 August 2014

Free Mini Bar

Nights * 3

Single Room

Start Booking

User @ Verifier

Demo Application



The screenshot shows a web browser window with several tabs: 'InspectionRequest ...', 'CredentialIssuance ...', 'Booking List', 'Show Booking', and 'Show Birthday'. The address bar shows the URL 'er-application/booking/confirmBooking' and a search engine 'Google'. The page content includes the ABC4 TRUST logo and the title 'End User Application @ Verifier'. A navigation bar contains a 'Home' link. The main content area is titled 'Show Booking' and displays booking details: 'Room Category NORMAL', 'Arrival Date 2014-08-09 00:00:00 CEST', 'Free Mini Bar True', and 'Nights 3'. There are two information boxes: one indicating 'Firefox with ABC4Trust Extension : true' and another warning that 'Your creditcard information will be saved - protected by 'Inspection' - and in case of 'No Show' - a fee will be charged'. At the bottom, there are 'Cancel' and 'Confirm Booking' buttons.

User @ Verifier

Demo Application



2.20.1.118:7200/verifier-application/booking/confirmBooking

http://localhost:9093 - ABC4Trust User Interface - Mozilla Firefox


ABC4Trust Client Application

Identity Selection



Policy: Standard Booking

agree to the terms of service and cancellation policy.

Passport or Passport or Passport or Passport or Passport or Passport



Visa Credit Card or AMEX Credit Card



Information to be disclosed


Disclosed ownership and validity

- You own a valid Passport from Swiss Passport.
- You own a valid Visa Credit Card from VISA Creditcard Credential issued by Best Bank

Disclosed facts

- The value of Expiration Date from Visa Kreditkort is after or on 30.08.2014.

Inspectable attributes

-  Card Number of Visa Credit Card (123400000002) is inspectable by and only by Grounds: In case of no free cancellation and no show the credit card number sho

Disclose

Mode: Presentation. Accepted languages: [en, da, en_US]. SessionID Present140725114445387460.

User @ Verifier

Demo Application



A screenshot of a web browser window. The browser has several tabs open: 'InspectionRequest ...', 'CredentialIssuance ...', 'Booking List', 'Show Booking', and 'Show Birthday'. The address bar shows a URL ending in 'er-application/booking/showPresentationStatus?sessionToken=af218820-ffb1-4a0f-9522-345a1d33bb34&stat'. The search bar contains 'Google'. The main content area has a green header with the ABC4 TRUST logo and the text 'End User Application @ Verifier'. Below the header is a navigation bar with a 'Home' link. The main content area displays 'Result of Hotel Booking' in green, followed by the message 'Your Booking has been accepted!' and a 'Create new Booking' link. The footer is a solid green bar.

Hotel Booking

VERIFIER

Verifier

Demo Application



InspectionRequest ... x CredentialIssuance List x Booking List x Show Booking x Show Birthday x

ier-application/hotelAdmin/index

Google

ABC4 TRUST *Verifier Application*

Home

Booking List

Room Category	Arrival Date	Nights	Single Room	Confirmed	Sent To Inspector	Payment Cleared
NORMAL	2014-08-09 00:00:00 CEST	3	False	True	False	False
LAKEVIEW	2014-08-16 00:00:00 CEST	4	False	True	False	False
DISCOUNT	2014-09-05 00:00:00 CEST	1	True	True	False	False

Verifier

Demo Application



The screenshot shows a web browser window with several tabs: 'InspectionRequest ...', 'CredentialIssuance List', 'Show Booking', 'Show Booking', and 'Show Birthday'. The address bar shows 'er-application/hotelAdmin/show/4'. The page header features the ABC4 TRUST logo and the text 'Verifier Application'. Below the header is a navigation bar with 'Home' and 'Booking List'. The main content area is titled 'Handle Booking' and contains the text: 'Booking was confirmed by Customer. In case Customer does not show up we can claim our payment from Inspector.' Below this is a list of booking details:

Arrival Date	2014-08-09 00:00:00 CEST
Room Category	NORMAL
Nights	3
Single Room	False
Free Mini Bar	True
Confirmed	True
Sent To Inspector	False
Payment Cleared By Inspector	False

Customer did not show up.

[Send PresentationToken to Inspector](#)

Verifier

Demo Application



er-application/hotelAdmin/sendPresentationTokenToInspector/4

ABC4 TRUST *Verifier Application*

Home Booking List

Handle Booking

PresentationToken was sent Inspector200

Payment claim has been sent to Inspector - but is not confirmed yet!"

Arrival Date	2014-08-09 00:00:00 CEST
Room Category	NORMAL
Nights	3
Single Room	False
Free Mini Bar	True
Confirmed	True
Sent To Inspector	True
Payment Cleared By Inspector	False

Get Payment Clearing Status From Inspector

Hotel Booking

INSPECTOR


Inspector Demo Application



InspectionRequest ... x CredentialIssuance List x Show Booking x Show Booking x Show Birthday x

er-application/inspectionRequest/index

Google



Inspector Application

[Home](#)

InspectionRequest List

Customer Name	Inspection Token	Inspection Result
SweetDreamSuites	99310c8e-3e40-4b81-b3a7-4c50ef496212	
SweetDreamSuites	c62d24e7-d778-4f46-a1dc-c657f8f7acd6	


Inspector Demo Application



Browser tabs: Show InspectionRe... x CredentialIssuance List x Show Booking x Show Booking x Show Birthday x

Address bar: r-application/inspectionRequest/showInspectionRequest/3

Search: Google



Inspector Application

Home | InspectionRequest List

Show InspectionRequest

Customer Name	SweetDreamSuites
Inspection Token	99310c8e-3e40-4b81-b3a7-4c50ef496212
Inspection Result	


Inspector Demo Application



Browser tabs: Show InspectionRe... x CredentialIssuance List x Show Booking x Show Booking x Show Birthday x

Address bar: er-application/inspectionRequest/inspectPresentationToken/3

Search: Google



Inspector Application

[Home](#) [InspectionRequest List](#)

Show InspectionRequest

! Presentation token was Inspected : CardNumber = 123400000002

Customer Name	SweetDreamSuites
Inspection Token	99310c8e-3e40-4b81-b3a7-4c50ef496212
Inspection Result	CardNumber = 123400000002

[Back](#)

Inspector Demo Application



InspectionRequest ... x CredentialIssuance List x Show Booking x Show Booking x Show Birthday x

...-application/inspectionRequest/index

Google

Inspector Application

Home

InspectionRequest List

Information: Presentation token was Inspected : CardNumber = 123400000002

Customer Name	Inspection Token	Inspection Result
SweetDreamSuites	99310c8e-3e40-4b81-b3a7-4c50ef496212	CardNumber = 123400000002
SweetDreamSuites	c62d24e7-d778-4f46-a1dc-c657f8f7acd6	

Hotel Booking

VERIFIER

Verifier

Demo Application



The screenshot shows a web browser window with several tabs: 'InspectionRequest ...', 'CredentialIssuance List', 'Show Booking', 'Show Booking', and 'Show Birthday'. The address bar shows the URL 'er-application/hotelAdmin/getPaymentClearingStatusFromInspector/4'. The page header features the ABC4 TRUST logo and the text 'Verifier Application'. Below the header is a navigation bar with 'Home' and 'Booking List'. The main content area is titled 'Handle Booking' and contains a message box: 'PresentationToken was accepted by Inspector200'. Below this, a confirmation message reads: 'Payment has been cleared by Inspector!'. A list of booking details follows:

Arrival Date	2014-08-09 00:00:00 CEST
Room Category	NORMAL
Nights	3
Single Room	False
Free Mini Bar	True
Confirmed	True
Sent To Inspector	True
Payment Cleared By Inspector	True

At the bottom of the content area is a 'Back' button.

Verifier

Demo Application



InspectionRequest ... x CredentialIssuance List x Booking List x Show Booking x Show Birthday x

er-application/hotelAdmin/index

Google

Booking List

Room Category	Arrival Date	Nights	Single Room	Confirmed	Sent To Inspector	Payment Cleared
<u>NORMAL</u>	2014-08-09 00:00:00 CEST	3	False	True	True	True
<u>LAKEVIEW</u>	2014-08-16 00:00:00 CEST	4	False	True	True	False
<u>DISCOUNT</u>	2014-09-05 00:00:00 CEST	1	True	True	False	False

Demo

AGE VERIFICATION

Age Verification

USER @ VERIFIER

User @ Verifier


Demo Application



InspectionRequest ... x CredentialIssuance ... x Booking List x Create Booking x Compare Birthday ... x

er-application/birthday/index

Google



End User Application @ Verifier

[Home](#)

Verify Birthday

Enter date. Date will be compared to Birthday attributes within your credentials.

Birthday *

User @ Verifier


Demo Application



InspectionRequest ... x CredentialIssuance ... x Booking List x Create Booking x Show Birthday x

ier-application/birthday/verifyBirthday_abc4trustPlugin

Google



End User Application @ Verifier

Home

Show Birthday

Firefox with ABC4Trust Extension : true

The specified date will be compared to Birthday attributes within your credentials.

Birthday 1986-08-05 00:00:00 CEST

Cancel

User @ Verifier

Demo Application



The screenshot shows a web browser window with several tabs: 'InspectionRequest ...', 'CredentialIssuance ...', 'Booking List', 'Create Booking', and 'Show Birthday'. The address bar contains the URL 'er-application/birthday/showPresentationStatus?sessionToken=ce43597c-ca13-47dc-8cb3-6947644cfee3&sta'. The page content includes the ABC4 TRUST logo and the title 'End User Application @ Verifier'. A navigation bar has a 'Home' link. The main content area is titled 'Result of Birthday Presentation' and contains the text: 'We have verified your PresentationToken with Policy urn:eu:abc4trust:demo:comparebirthday:before:session. Your birthday is Before 1986-08-05 00:00:00 CEST'. At the bottom, there is a button labeled 'Run new Birthday Verification'.

More Information



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