



SCALES

HEALTHCARE SERVICES DESIGN & ARCHITECTURE



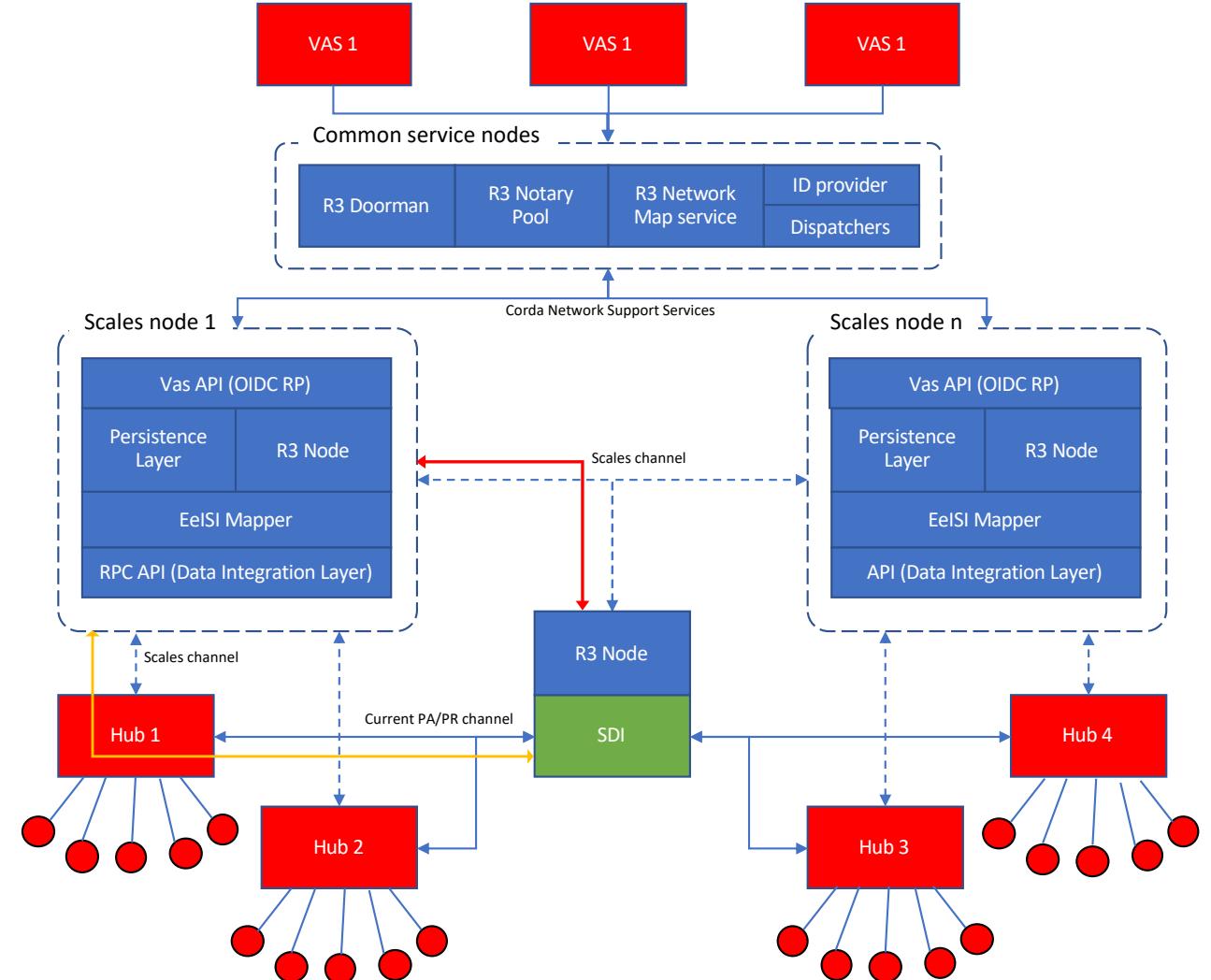
SCALES GENERAL ARCHITECTURE

The project involves the development of an "SDI-like" system based on distributed ledgers for the transmission of invoices between Suppliers and Customers, open to the implementation of value-added services provided by third-party Service Providers (VAS Providers)

The general architecture is based on:

- **SCALES nodes**, managed by different providers, that communicate with each other for the transmission of information related to invoice documents and directly implement the distributed ledger architecture
- **Common Services nodes**, which VAS Providers access to in order to retrieve resources and information on the different SCALES nodes

 Indirect Transaction
 Direct Transaction

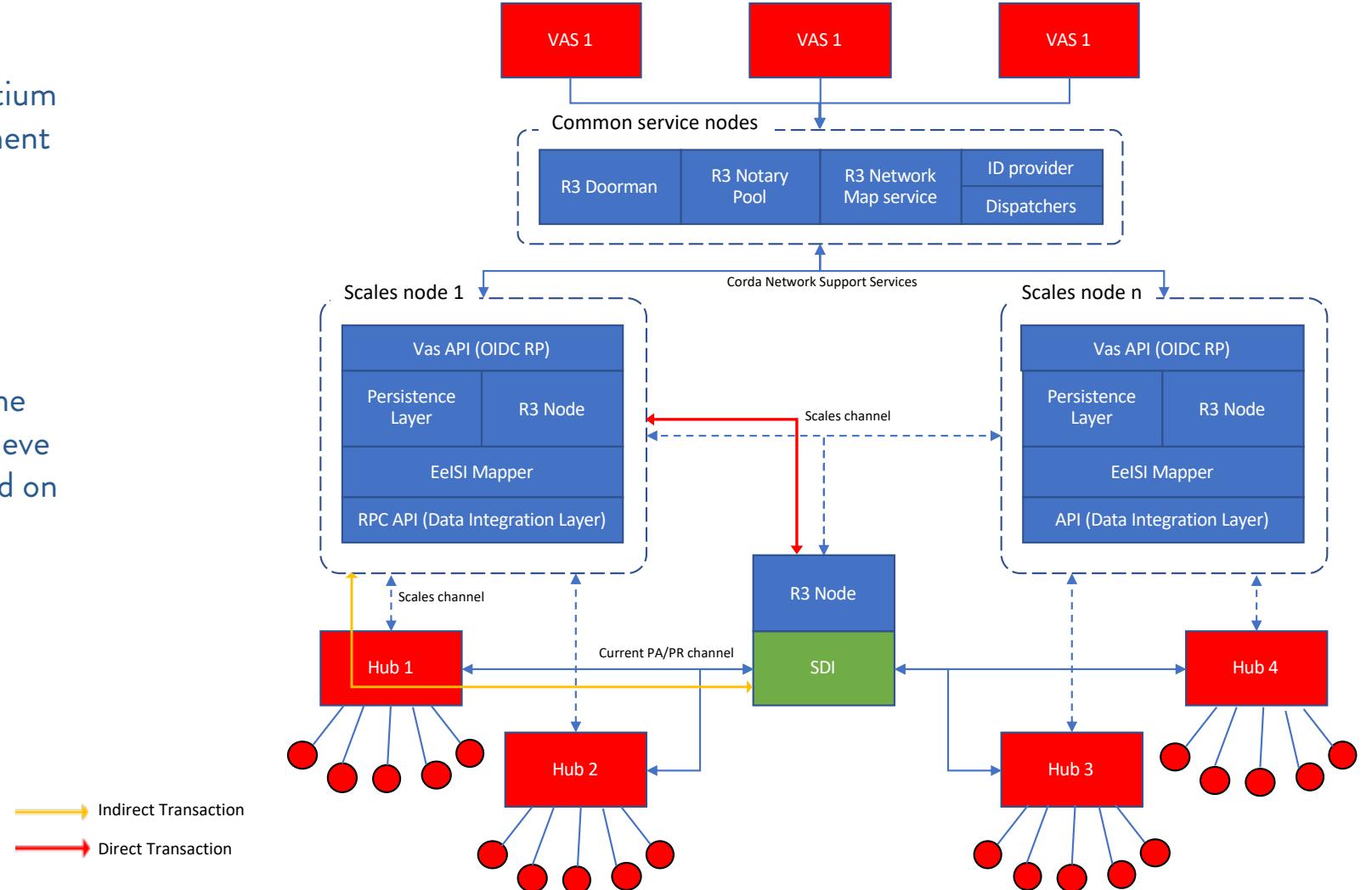


SCALES GENERAL ARCHITECTURE

In the SCALES project, the DAFNE Consortium acts as a VAS Provider, so it must not implement either a SCALES node or a Common Service node

The platform developed by the DAFNE Consortium will:

- Query the Common Service node using the API developed in SCALES project to retrieve information related to invoices transmitted on the SCALES infrastructure
- Query platforms and ministerial nodes
- Develop value-added services for business operators and public entities





DAFNE VALUE-ADDED SERVICES

The services provided by the DAFNE Consortium (through an ad-hoc platform) as part of the SCALES project are dedicated to the operators of the healthcare supply chain of the Consortium ecosystem: Manufacturers and Market Authorization Holders (Producers), Wholesalers and Public Health Facilities (Public)

The services provided are the following:

- **Invoice-payment reconciliation in the Producers-Public relationship (B2G – Business to Government)**

Thanks to this service, Producers are able to see the status of the payment related to invoices issued to Public entities, allowing the reconciliation of issued invoices (eventually transmitted through the SCALES infrastructure) with the payment mandates present within the Commercial Credit Platform (PCC)

- **Invoice-payment reconciliation in the Producers-Wholesalers relationship (B2B – Business to Business)**

Thanks to this service, Producers are able to see the status of the payment related to invoices issued to wholesalers, allowing the reconciliation of issued invoices issued (eventually transmitted through the SCALES infrastructure) with the payment mandates that the wholesalers will voluntarily upload on the platform (not being available PCC for B2B relationships)

- **Planning of public expenses in healthcare market (G2B – Government to Business)**

Thanks to this service, Public entities are able to monitor the due date of the received invoices, planning the outbound cash flow, allowing a complete visibility of a 6 months window period from the date of access, with the amount already paid and the total amount due

#1: B2G RELATIONSHIPS

Invoice-payment reconciliation in the Producers – Public relationship (B2G – Business to Government)

Thanks to this service, Producers are able to see the status of the payment related to invoices issued to Public entities, allowing the reconciliation of issued invoices (eventually transmitted through the SCALES infrastructure) with the payment mandates present within the Commercial Credit Platform (PCC)

CONDAFNEPLATFORM

SCALES - B2G Invoices

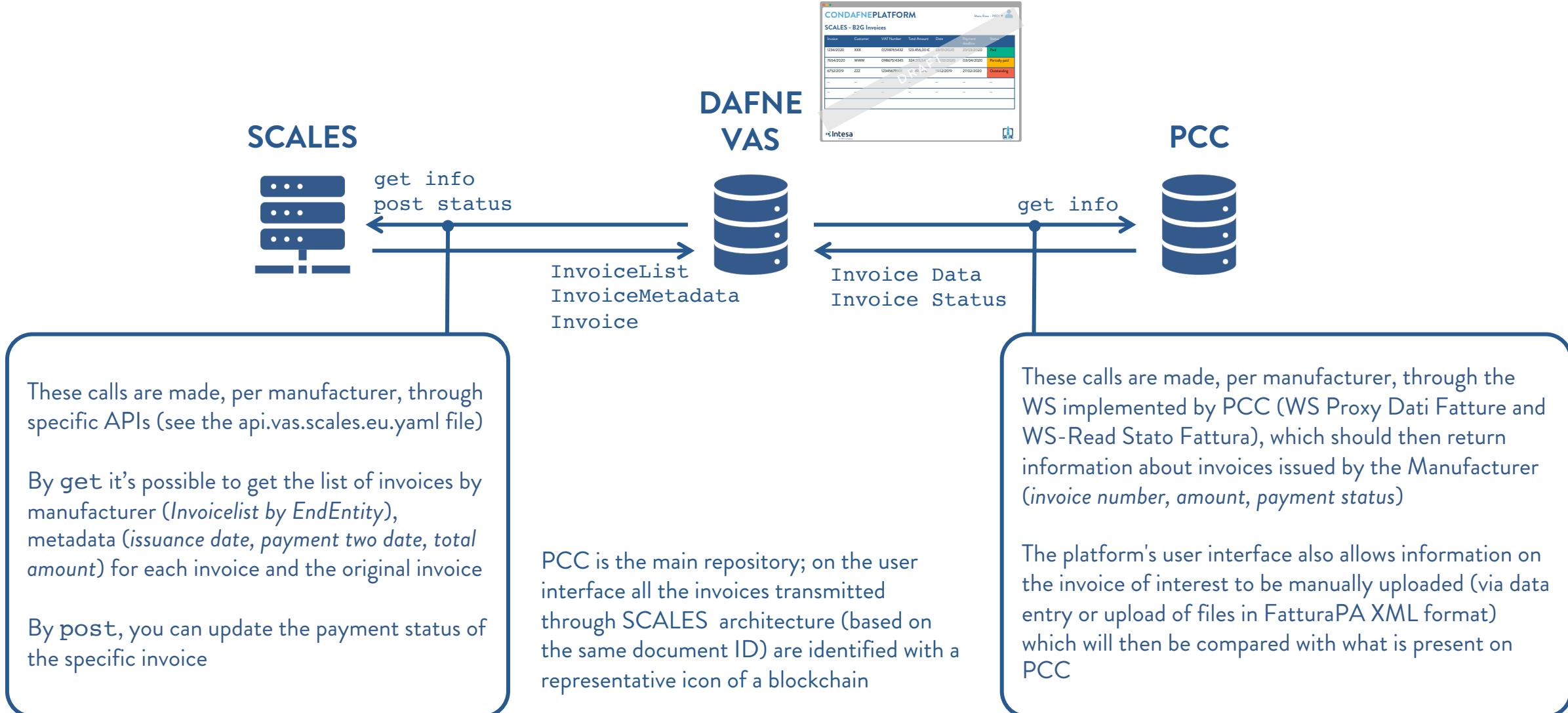
Invoice	Customer	VAT Number	Total Amount	Date	Payment due date	Status
1234/2020	XXX	01298765432	123.456,00 €	23/01/2020	23/03/2020	Paid
7654/2020	WWW	09867514345	324.213,54 €	03/02/2020	03/04/2020	Partially paid
6752/2019	ZZZ	12345678901	123.456,00 €	19/12/2019	27/02/2020	Outstanding
...
...
...

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#1: B2G RELATIONSHIPS



#1: B2G RELATIONSHIPS

Some Screenshots of test environment

Trusted HUB 07-12-2020 15:20:00

CONSORZIO DAFNE

Logout Servizi Contattaci Aiuto

Lista Fatture PA

Comunità: DAFNE Utente: SCALDES017
La password scade tra 41 giorni.

Azienda Fornitore Codice Fiscale Fornitore

Fattura P.IVA/CF Cliente Status Data Fattura

Ricerca Annulla

Numero record trovati: 13543

Fattura	P.IVA/CF	Cliente	Importo Totale	Valuta	Tipo Doc.	Data Fattura	Scadenza Pagamento	Status
...	3.003,00	EUR	TD01	26/11/2020	25/01/2021	Non Pagata
...	533,71	EUR	TD01	26/11/2020	25/01/2021	Non Pagata
...	9.441,00	EUR	TD01	26/11/2020	25/01/2021	Pagata
...	63,47	EUR	TD01	26/11/2020	25/01/2021	Pagata
...	4.357,39	EUR	TD01	26/11/2020	25/01/2021	Non Pagata
...	5.544,00	EUR	TD01	26/11/2020	25/01/2021	Non Pagata
...	8.286,96	EUR	TD01	26/11/2020	25/01/2021	Non Pagata
...	101,75	EUR	TD01	25/11/2020	24/01/2021	Pagata
...	33.998,25	EUR	TD01	25/11/2020	24/01/2021	Pagata
...	17.866,53	EUR	TD01	25/11/2020	24/01/2021	Non Pagata
...	710,99	EUR	TD01	25/11/2020	24/01/2021	Non Pagata
...	1.584,00	EUR	TD01	25/11/2020	24/01/2021	Non Pagata
...	2.902,46	EUR	TD01	25/11/2020	24/01/2021	Non Pagata
...	9.441,00	EUR	TD01	25/11/2020	24/01/2021	Non Pagata
...	26.065,33	EUR	TD01	25/11/2020	24/01/2021	Pagata
...	3.960,00	EUR	TD01	25/11/2020	24/01/2021	Pagata
...	56,89	EUR	TD01	25/11/2020	24/01/2021	Non Pagata
...	7.372,00	EUR	TD01	26/11/2020	25/01/2021	Non Pagata

Trusted HUB 07-12-2020 15:20:00

CONSORZIO DAFNE

Logout Servizi Contattaci Aiuto

Lista Fatture PA

Dettaglio Fattura

External System PCC External System BC

Importo Totale	Importo Imponibile	Importo Imposta	Valuta	Stato	Date Insert	Date Update
9441	8582,73	858,27	EUR	Pagata	29/11/2020 14:08:41	05/12/2020 14:08:34

Ricerca Annulla

Numero record trovati: 13543

Fattura	P.IVA/CF	Cliente	Importo Totale	Valuta	Tipo Doc.	Data Fattura	Scadenza Pagamento	Status
...	3.003,00	EUR	TD01	26/11/2020	25/01/2021	Non Pagata
...	533,71	EUR	TD01	26/11/2020	25/01/2021	Non Pagata
...	9.441,00	EUR	TD01	26/11/2020	25/01/2021	Pagata
...	63,47	EUR	TD01	26/11/2020	25/01/2021	Pagata
...	4.357,39	EUR	TD01	26/11/2020	25/01/2021	Non Pagata
...	5.544,00	EUR	TD01	26/11/2020	25/01/2021	Non Pagata
...	8.286,96	EUR	TD01	26/11/2020	25/01/2021	Non Pagata
...	101,75	EUR	TD01	25/11/2020	24/01/2021	Pagata
...	33.998,25	EUR	TD01	25/11/2020	24/01/2021	Pagata
...	17.866,53	EUR	TD01	25/11/2020	24/01/2021	Non Pagata
...	710,99	EUR	TD01	25/11/2020	24/01/2021	Non Pagata
...	1.584,00	EUR	TD01	25/11/2020	24/01/2021	Non Pagata
...	2.902,46	EUR	TD01	25/11/2020	24/01/2021	Non Pagata
...	9.441,00	EUR	TD01	25/11/2020	24/01/2021	Non Pagata
...	26.065,33	EUR	TD01	25/11/2020	24/01/2021	Pagata
...	3.960,00	EUR	TD01	25/11/2020	24/01/2021	Pagata
...	56,89	EUR	TD01	25/11/2020	24/01/2021	Non Pagata
...	7.372,00	EUR	TD01	26/11/2020	25/01/2021	Non Pagata

#2: B2B RELATIONSHIPS

Invoice-payment reconciliation in the Producers-Wholesalers relationship (B2B – Business to Business)

Thanks to this service, Producers are able to see the status of the payment related to invoices issued to wholesalers, allowing the reconciliation of issued invoices issued (eventually transmitted through the SCALES infrastructure) with the payment mandates that the wholesalers voluntarily upload on the platform (not being available PCC for B2B relationships)

Giuseppe Verdi – PRD2 ▾ 

CONDAFNEPLATFORM

SCALES - B2B Invoices

Invoice	Customer	VAT Number	Total Amount	Date	Payment due date	Status
34/2020	XXX	01298545432	13.456,00 €	23/01/2020	23/03/2020	Paid
76/2020	WWW	98786751434	24.213,54 €	03/02/2020	03/04/2020	Partially Paid
672/2019	YYY	18765432901	15.49,35 €	19/12/2019	27/02/2020	Outstanding
...
...

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#2: B2B RELATIONSHIPS

Invoice-payment reconciliation in the Producers-Wholesalers relationship (B2B – Business to Business)

Thanks to this service, Wholesalers are able to see the list of different invoices received by Producers.

Hence wholesalers are able to change the status (Paid or Partially Paid) of a specific invoices, giving this visibility to Producers.

Franco Neri - WHS1 ▾ 

CONDAFNEPLATFORM

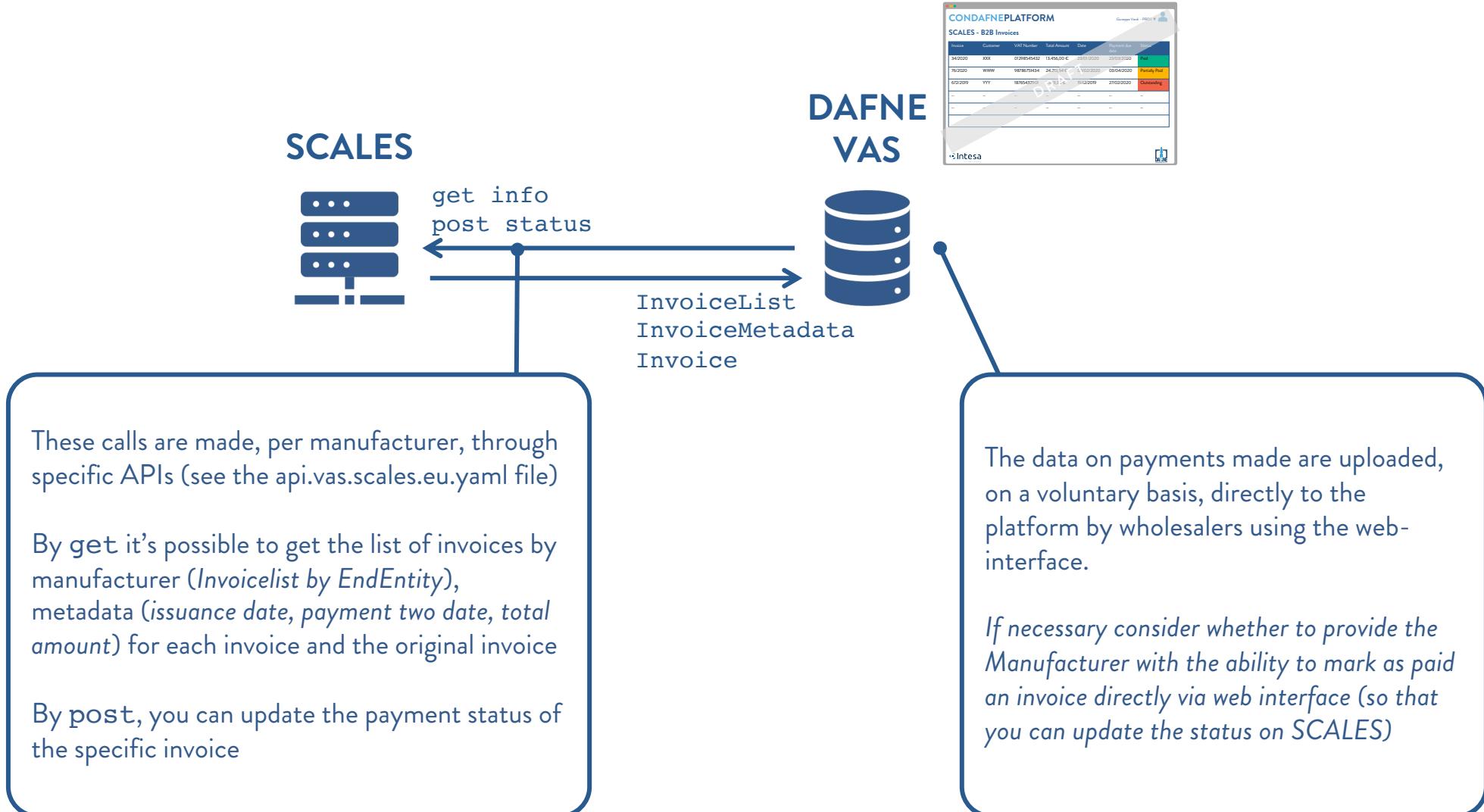
SCALES - B2B Invoices

Invoice	Supplier	VAT Number	Total Amount	Date	Payment due date	Status
34/2020	XXX	01298545432	13.456,00 €	23/01/2020	23/03/2020	Paid
76/2020	WWW	98786751434	24.213,54 €	03/02/2020	03/04/2020	Partially Paid
672/2019	YYY	18765432901	15.49,35 €	19/12/2019	27/02/2020	Outstanding
...
...

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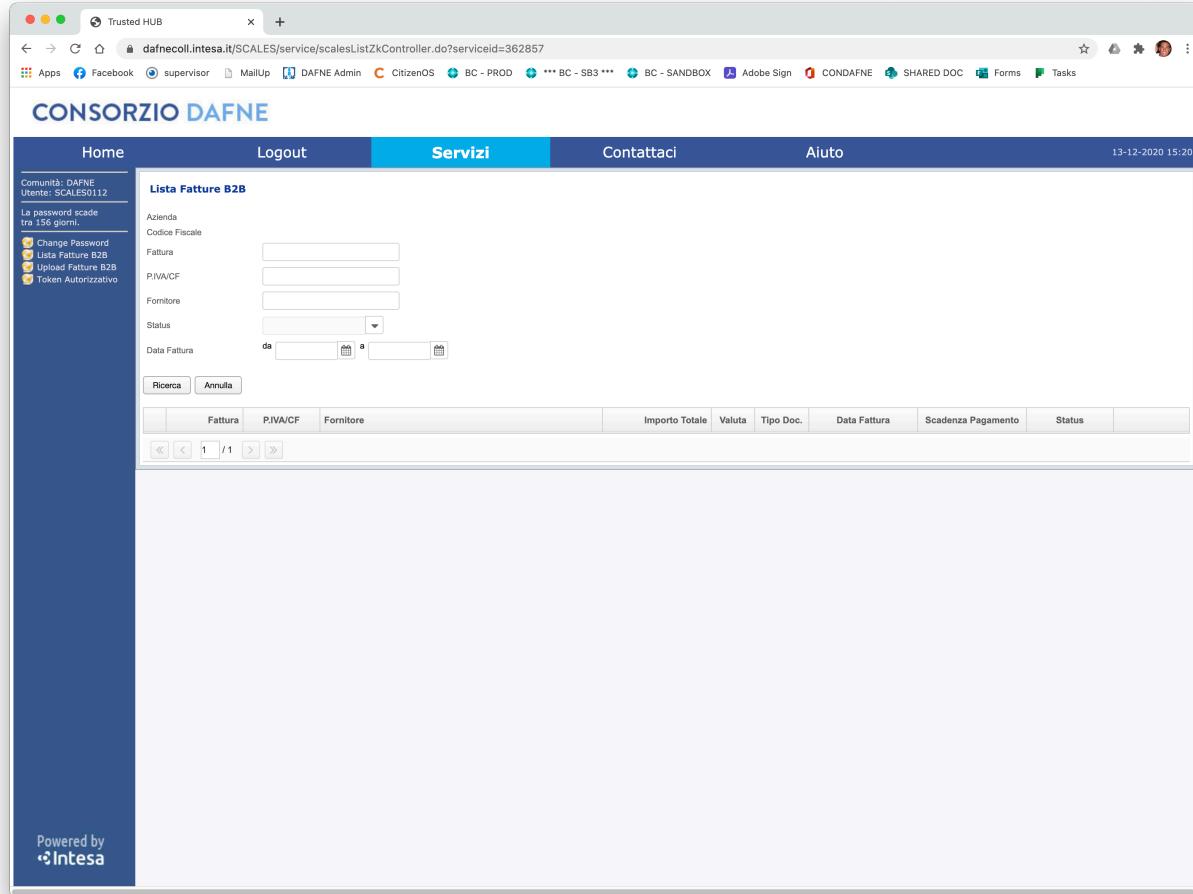


#2: B2B RELATIONSHIPS



#2: B2B RELATIONSHIPS

Some Screenshots of test environment



The screenshot shows a web-based application window titled "Trusted HUB" with the URL dafnecoll.intesa.it/SCALES/service/scalesListZkController.do?serviceId=362857. The top navigation bar includes links for "Home", "Logout", "Servizi" (selected), "Contattaci", and "Aiuto". The date "13-12-2020 15:20:55" is displayed on the right. The main content area is titled "CONSORZIO DAFNE" and shows a "Lista Fatture B2B" (B2B Invoices List). On the left, there is a sidebar with a "Community: DAFNE Utente: SCALES0112" section and a note about the password expiring in 156 days. Below this are several checkboxes for account management: "Change Password", "Lista Fatture B2B", "Upload Fatture B2B", and "Token Autorizzativo". The main form fields include "Azienda", "Codice Fiscale", "Fattura", "P.IVA/CF", "Fornitore", "Status", and "Data Fattura" with a date range selector. At the bottom, there is a search button ("Ricerca") and a cancel button ("Annulla"). A table below the search bar displays columns for "Fattura", "P.IVA/CF", "Fornitore", "Importo Totale", "Valuta", "Tipo Doc.", "Data Fattura", "Scadenza Pagamento", and "Status". The table shows one record with page navigation buttons at the bottom.

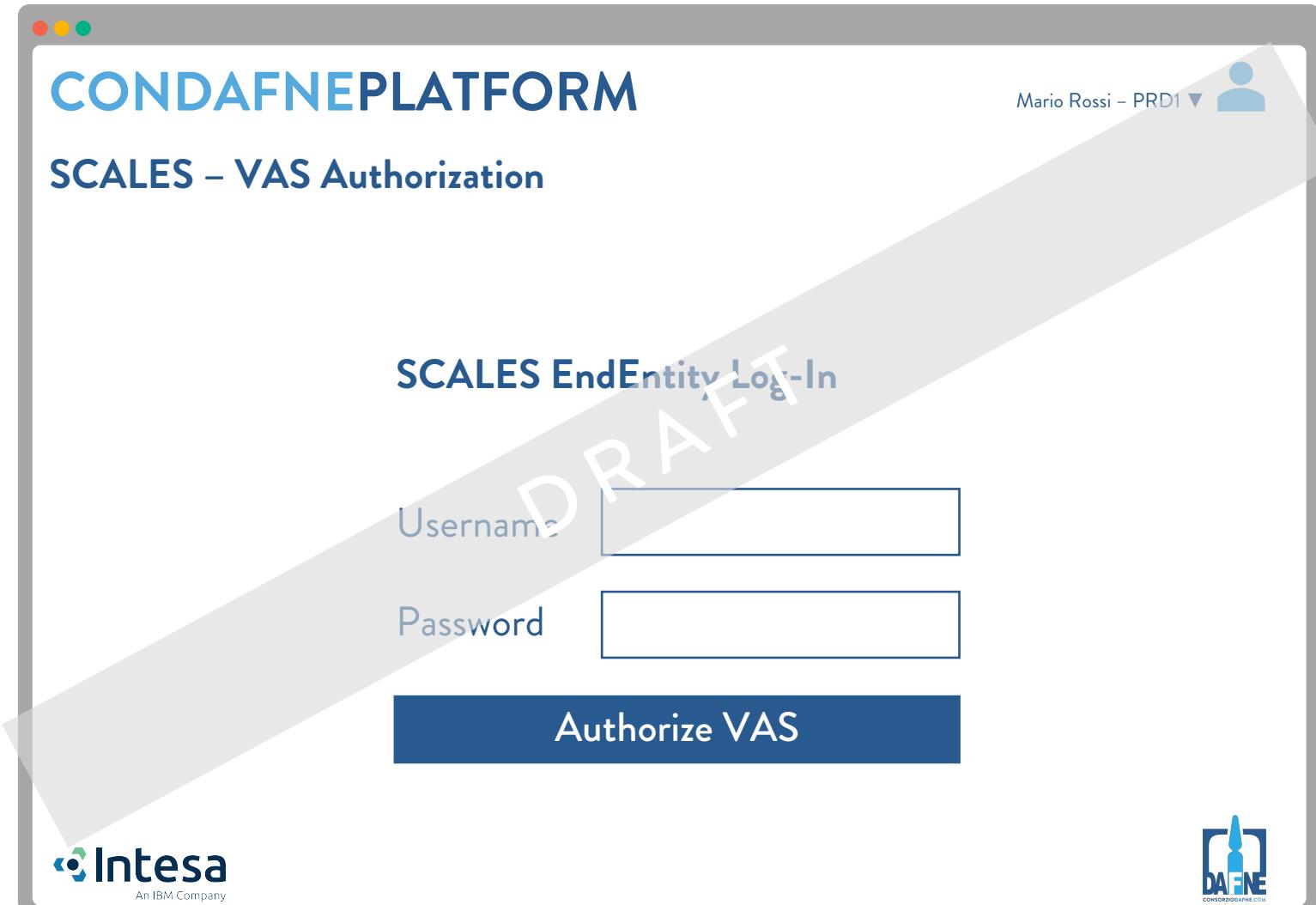
#2 & #3 – VAS AUTHORIZATION BY SUPPLIERS

VAS Authorization process

Producer and Wholesaler user logs in into CONDAFNEPLATFORM and select the service «SCALES VAS Authorization».

The user inserts the SCALSE EndEntity log-in credential (provided by SCALES Identity Provider) and then Autorize the VAS to access all the documents stored in SCALES on its behalf.

The «Authorize VAS» button calls VAS-UI API that will return an **Authorization Token**. This JWT is stored in CONDAFNEPLATFORM and is used to make future API call (get/post)



#2 & #3 – VAS AUTHORIZATION BY SUPPLIERS

VAS Authorization test environment screenshot

Trusted HUB x +

dafnecoll.intesa.it

Apps Facebook supervisor MailUp DAFNE Admin CitizenOS BC - PROD *** BC - SB3 *** BC - SANDBOX Adobe Sign CONDAFNE SHARED DOC Forms Tasks

CONSORZIO DAFNE

Home Logout Servizi Contattaci Aiuto 13-12-2020 15:16:11

Token Autorizzativo

Azienda Fornitore 0112 - 0112
Codice Fiscale Fornitore 10406510155
Status Token Scaduto

Username ⚠ Non è permesso il campo vuoto x
Password ⚠ Non è permesso il campo vuoto x

Login

Community: DAFNE Utente: SCALES0112
La password scade tra 156 giorni.
Change Password Lista Fatture B2B Upload Fatture PA Token Autorizzativo

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Trusted HUB x +

dafnecoll.intesa.it/SCALES/service/scalesTokenZkController.do?serviceId=362841

Apps Facebook supervisor MailUp DAFNE Admin CitizenOS Business Central BC - SANDBOX T... Adobe Sign CONDAFNE SHARED DOC Forms Tasks

CONSORZIO DAFNE

Home Logout Servizi Contattaci Aiuto 07-12-2020 15:19:05

Token Autorizzativo

Azienda Fornitore
Codice Fiscale Fornitore
Status Token Attivo
Data Scadenza Token 25/02/2021 10:09:10 Rigenera

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#3: PLANNING OF PUBLIC EXPENDITURE

Planning of public expenses in healthcare market

Thanks to this service, the Public entities are able to monitor the due date of the received invoices, planning the outbound cash flow

From the date of access there is a complete visibility of a 6 months window period, the amount already paid and the total amount due

Total paid amount = sum of invoices amount with status Fully Paid and due date in the specific month

Total due amount = sum of invoices with due date in the specific month

Marco Neri – ENTE1


CONDAFNEPLATFORM

SCALES – Public Expenses Planning

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Status	Due date Month - 3 and before	Due date Month - 2	Due date Month - 1	Due date Current Month	Due date Month + 1	Due date Month + 2	Due date Month + 3 and after
TOTAL PAID AMOUNT	100,00 €	75,00 €	20,00 €	50,00 €	1.500,00 €	0,00 €	0,00 €
TOTAL DUE AMOUNT	100,00 €	200,00 €	50,00 €	1.000,00 €	3.250,00 €	500,00 €	350,00 €
OUTSTANDING (DUE-PAID)	0,00 €	125,00 €	30,00 €	850,00 €	1.750,00 €	500,00 €	350,00 €



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#3: PLANNING OF PUBLIC EXPENDITURE

Planning of public expenses in healthcare market

Thanks to this service, the Public entities are able to monitor the due date of the received invoices, planning the outbound cash flow

There is a list of all the invoices and their status (like Supplier view – see service #1 “B2G Relationships”)

Marco Neri – ENTE1 ▾ 

CONDAFNEPLATFORM

SCALES – Public Expenses List

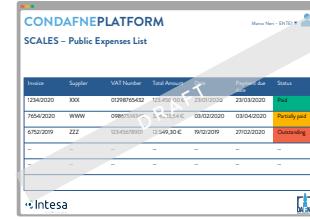
Invoice	Supplier	VAT Number	Total Amount	Date	Payment due date	Status
1234/2020	XXX	01298765432	123.456,00 €	23/01/2020	23/03/2020	Paid
7654/2020	WWW	09867514345	34.213,54 €	03/02/2020	03/04/2020	Partially paid
6752/2019	ZZZ	12345678901	12.549,30 €	19/12/2019	27/02/2020	Outstanding
...
...
...

DRAFT

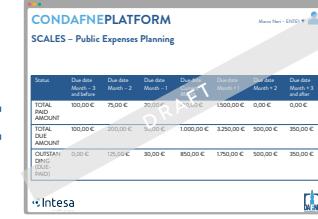
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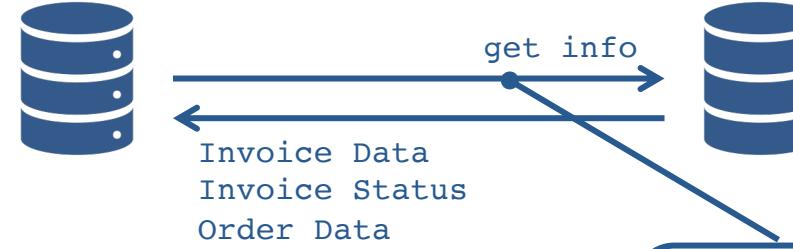
#3: PLANNING OF PUBLIC EXPENDITURE



**DAFNE
VAS**



PCC



These calls will be made, per Suppliers, through the WS implemented by PCC, which should then return information about orders sent through NSO and invoices received by the institution via SDI and their status

#3: PLANNING OF PUBLIC EXPENDITURE

Some Screenshots of test environment

Trusted HUB 07-12-2020 15:20:51

<dafnecoll.intesa.it>

Apps Facebook supervisor MailUp DAFNE Admin CitizenOS Business Central BC - SANDBOX T... Adobe Sign CONDAFNE SHARED DOC Forms Tasks

CONSORZIO DAFNE

Home Logout Servizi Contattaci Aiuto 07-12-2020 15:20:51

Comunità: DAFNE Utente: USL104USR
La password scade tra 155 giorni.

Change Password
 Lista Fatture PA
 Planning Scadenze

Lista Fatture PA

Azienda:
Codice Fiscale:
Fattura:
P.IVA/CF:
Fornitore:
Status:
Data Fattura: da a

Ricerca Annulla

Numeri record trovati: 165 

Fattura	P.IVA/CF	Fornitore	Importo Totale	Valuta	Tipo Doc.	Data Fattura	Scadenza Pagamento	Status	
...	489,32	EUR	TD01	08/10/2020	07/12/2020	Non Pagata	
...	3.653,10	EUR	TD01	08/10/2020	07/12/2020	Non Pagata	
...	2.904,92	EUR	TD01	07/10/2020	06/12/2020	Non Pagata	
...	978,65	EUR	TD01	07/10/2020	06/12/2020	Non Pagata	
...	16.709,54	EUR	TD01	07/10/2020	06/12/2020	Non Pagata	
...	978,65	EUR	TD01	05/10/2020	04/12/2020	Non Pagata	
...	11.332,75	EUR	TD01	05/10/2020	04/12/2020	Non Pagata	
...	5.809,65	EUR	TD01	01/10/2020	30/11/2020	Non Pagata	
...	6.683,82	EUR	TD01	01/10/2020	30/11/2020	Non Pagata	
...	13.656,89	EUR	TD01	29/09/2020	28/11/2020	Pagata	
...	5.582,84	EUR	TD01	29/09/2020	28/11/2020	Pagata	
...	1.584,00	EUR	TD01	28/09/2020	27/11/2020	Pagata	
...	7.721,24	EUR	TD01	23/09/2020	22/11/2020	Pagata	
...	8.986,99	EUR	TD01	23/09/2020	22/11/2020	Pagata	
...	5.012,87	EUR	TD01	22/09/2020	21/11/2020	Pagata	
...	5.627,23	EUR	TD01	22/09/2020	21/11/2020	Pagata	
...	515,17	EUR	TD01	22/09/2020	21/11/2020	Pagata	
...	7.932,93	EUR	TD01	18/09/2020	17/11/2020	Pagata	

Trusted HUB 07-12-2020 15:20:51

<dafnecoll.intesa.it/SCALES/service/scalesPlanningZkController.do?serviceId=362840>

Apps Facebook supervisor MailUp DAFNE Admin CitizenOS Business Central BC - SANDBOX T... Adobe Sign CONDAFNE SHARED DOC Forms Tasks

CONSORZIO DAFNE

Home Logout Servizi Contattaci Aiuto 07-12-2020 15:20:51

Comunità: DAFNE Utente: USL104USR
La password scade tra 155 giorni.

Change Password
 Lista Fatture PA
 Planning Scadenze

Planning Scadenze

Azienda:
Codice Fiscale:

Status	Data Scadenza						
	Mese <= 09/2020	Mese 10/2020	Mese 11/2020	Mese 12/2020	Mese 01/2021	Mese 02/2021	Mese >= 03/2021
Pagata	595.516,58	96.838,93	122.919,34	0,00	0,00	0,00	0,00
Parzialmente Pagata	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Non Pagata	0,00	0,00	12.493,67	135.630,26	135.718,82	0,00	0,00

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www.consortiodafne.com

info@consorziodafne.com

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c/o LTA Studio
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20123 Milano (MI)

Sedi Operative

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50141 Firenze

Viale Monza, 259
20126 Milano