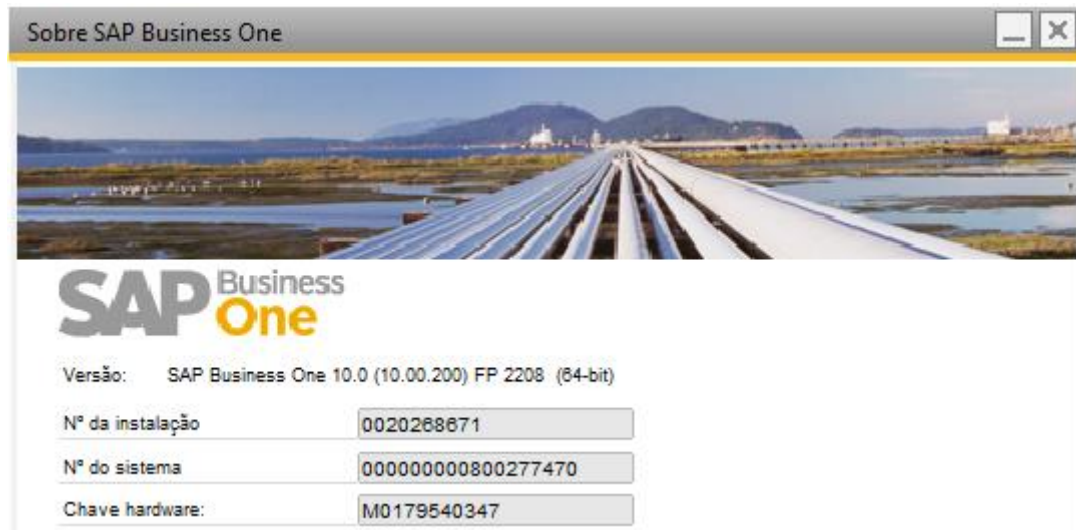


## **SAP Business One Service Layer Improvement Points** **(All tests performed in SAP version 10.00.200)**



This document contains some topics related to the SAP Service Layer that may somehow meet or not the requirements that have been proposed to our team.

They impact on four SDK add-on solutions and two loosely coupled solutions which are used by roughly six thousand users.

### **Loosely-coupled solutions:**

Sales One (External sales solution): a hundred users

B1Lite (Purchase web portal): four thousand users (Big customers)

All tests were performed in a development-environment based on Hana and the SQL Server.

Applications used:

- POSTMAN VERSION 10.14.0.0;
- Visual Studio 2022;
- SAP Business One (10.00.200) FP 2208.

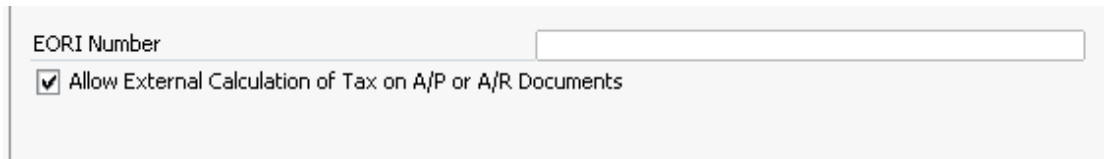
1. Summary

1. Summary.....2

1. Tax calculation.....3

## 1. Tax calculation

Hello SAP, we already tested the last version about external tax calculation (FP 2208) and it is working perfectly.



The screenshot shows a SAP form with a light gray background. At the top, there is a label 'EORI Number' followed by a text input field. Below this, there is a checkbox that is checked, with the text 'Allow External Calculation of Tax on A/P or A/R Documents' to its right.

This subject is **very important** because there is a need for any external system like (e-commerce, sales force, meds distribution) to calculate and to generate a pre-order (not draft) with the same values that B1 Tax Engine make. This functionality will be used **by all partners**.

Regarding this, we also need to allow us to calculate using B1 Tax Engine and return us all the tax values. Nowadays it is only possible to do this by generating a DRAFT document, so we understand this functionality already exists and we need it to be transformed into a new Service Layer endpoint.

There must be a new endpoint in the Service Layer that returned the taxes amounts that would have been applied if a marketing document was posted.

We expect to have the same data as the ones that are returned by Service Layer when we query any marketing document such as an invoice (OINV and INV4).

The scenario where we want to consume such a service refers to external applications that needs to report to the user each tax amount that applies to a transaction.

Having such pieces of information, we are able to compose the amount a buyer will have to pay.

Currently, to achieve this, for each transaction we create a draft document, collect the data we need and then, delete the draft. Doing so through DIAPI leads to performance issues when dealing with many transactions.

The image below is an example of an external application that should report to the user an invoice amount of \$14,000.00 instead of \$10,000.00. The difference is due to taxes amounts applied to the transaction that are missing. If we were able to call a service that returned the taxes amounts we could fulfill this gap.

Sales Force (ArtNew ), As you can see no tax information is mentioned, just a comment "+ ST". So in this case our partner send to us a order que we need to generate a draft retrieving tax information (PIS, ICMS etc).

15:54

70

←

#G. AMOXICILINA 500...

Produto Mix

Ver Mix Geral

Quant.: 0 un/cx

Quant. Fabr.: 0

Per. Pedido: 0 %

Per. Fabr.: 0 %

Quant.

1

Desc. %

70,01

P. Venda

6,33

Desc. Finan. %

1,5

Mínima / Máxima

1 / 999999

Preço mínimo

4.32

Valor + Desc. Fina

R\$ 6,24

Líquido / Promoção

R\$ 6,33

CMV Item

64,93

CMV Pedido

64,93

CVP

7%

CVV

R\$ 0,44

CPV

R\$ 0,44

Verba Disponível

R\$ 136,04

ST Unitário

R\$ 0,00

ST Total

R\$ 0,00

Verba Gerada

R\$ 0,00 /

Preço Unitário + ST

R\$ 6,33

Total + ST

R\$ 6,33

Adicionar Produto

We expect to get tax info from Service Layer the same way the get business partners, items and prices info.

And finally, when the document was created in SAP Business One it would result the same document amount previewed in the external application.

**Nota Fiscal de Saída**

Cliente: C30000  
Nome: Maxi-Teq do Brasil LTDA  
Pessoa de contato: Antonio - Vendas  
Nº de ref. do cliente: [vazio]  
Moeda corrente: [vazio]  
☐ Consumidor final

Nº Primário: 3310  
Status: Abrir  
Data de lançamento: 20/05/2023  
Data de vencimento: 19/06/2023  
Data do documento: 20/05/2023

ICT: [vazio]

Conteúdo	Logística	Contabilidade	Imposto	Anexos	Campos de localização										
#	Nº do item	Descrição do item	Quantidade	Preço unitário	% do desconto	Total (MC)	Utilização	Código de im...	Valor do imposto (...)	CFOP	CST para IC...	Sujeito a IRF	Valor de im...	Data de e...	Depósito
1	A00001	J.B. Impressora Officeprint 1420	1	R\$ 5.000,00	0,00	R\$ 5.000,00	Venda Adquirida Terc	5101-001	R\$ 3.000,00	5102	0,00	Sim	R\$ 0,00		01
2	20005_TAX_	WITHOLDING_TAX_SAMPLE	1	R\$ 5.000,00	0,00	R\$ 5.000,00	Venda Adquirida Terc	5101-001	R\$ 3.000,00	5102	1,00	Sim	R\$ 452,00		01

Vendedor: Júlia Braga  
Tributar: Braga, Júlia  
Uso principal: Venda Adquirida Terc

☐ Execução da ordem de pagamento

Observações: [vazio]

**Tabela de imposto retido na fonte**

#	o	Nome	Aliquota	Valor base	Valor sujeito a i...	Valor IRF	Categoria	Tipo b...	Conta	Có...
1		Saída - Imposto f	0,65	R\$ 8.000,00	R\$ 8.000,00	R\$ 52,00	Pagamento: Bruto		1.01.03.06	
2		Saída NF	8,00	R\$ 5.000,00	R\$ 5.000,00	R\$ 400,00	Pagamento: Líquido		1.01.03.06	

Total antes do desconto: R\$ 10.000,00  
Desconto: %  
Adiantamento total: [vazio]  
Despesa adicional: [vazio]  
Arredondamento: [vazio]  
Imposto: R\$ 6.000,00  
Valor de imposto retido: [vazio]  
Total a pagar: R\$ 14.200,00  
Valor aplicado: [vazio]  
Saldo: R\$ 14.200,00

As a suggestion, we understand that having a service such as the one that creates drafts could be implemented to just calculate taxes without persisting the document to the data base.

The payload to be sent and the one returned by Service Layer would be the same as for any other marketing document. Just for the purpose of calculating taxes.

An idea of our suggestion:

A new endpoint in SAP Service Layer:

POST <https://localhost:50000/b1s/v1/TaxService>

```
{
  "DocDate": "2023-05-20T00:00:00Z",
  "DocDueDate": "2023-06-19T00:00:00Z",
  "CardCode": "C20000",
  "CardName": "Maxi-Teq do Brasil LTDA",
  "TotalDiscount": 0.0,
  "DANFELgTxt": "Valor aproximado dos tributos: R$ 8.725,00.",
  "DocumentLines": [
    {
      "ItemCode": "A00001",
      "ItemDescription": "J.B. Impressora Officeprint 1420",
      "Quantity": 1.0,
      "Price": 5000.0,
    }
  ]
}
```

```

        "DiscountPercent": 0.0,
        "WarehouseCode": "01",
        "LineTotal": 5000.0,
        "Usage": 10,
        "UnitPrice": 5000.0
    },
    {
        "ItemCode": "I0005_TAX_WTHOLDING",
        "ItemDescription": "WTHOLDING_TAX_SAMPLE",
        "Quantity": 1.0,
        "Price": 5000.0,
        "DiscountPercent": 0.0,
        "WarehouseCode": "01",
        "SalesPersonCode": 2,
        "LineTotal": 5000.0,
        "Usage": 10,
        "UnitPrice": 5000.0
    }
]
}

```

### The expected response body:

```

{
    "DocDate": "2023-05-20T00:00:00Z",
    "DocDueDate": "2023-06-19T00:00:00Z",
    "CardCode": "C20000",
    "CardName": "Maxi-Teq do Brasil LTDA",
    "VatSum": 6000.0,
    "VatSumSys": 6000.0,
    "VatSumFc": 0.0,
    "DocTotalSys": 14200.0,
    "WTApplied": 0.0,
    "WTAppliedFC": 0.0,
    "BaseAmount": 16000.0,
    "BaseAmountSC": 16000.0,
    "BaseAmountFC": 0.0,
    "WTAmount": 0.0,
    "WTAmountSC": 0.0,
    "WTAmountFC": 0.0,
    "VatDate": null,
    "DocumentsOwner": 3,
    "DANFELgTxt": "Valor aproximado dos tributos: R$ 8.725,00.",
    "DocumentLines": [
        {
            "ItemCode": "A00001",
            "ItemDescription": "J.B. Impressora Officeprint 1420",
            "Quantity": 1.0,
            "ShipDate": null,
            "Price": 5000.0,
            "PriceAfterVAT": 9362.50,
            "DiscountPercent": 0.0,

```

```

"WarehouseCode": "01",
"SalesPersonCode": 2,
"TaxCode": "5101-001",
"NetTaxAmount": 3000.0,
"NetTaxAmountFC": 0.0,
"NetTaxAmountSC": 3000.0,
"LineTotal": 5000.0,
"TaxPercentagePerRow": 87.250,
"TaxTotal": 3000.0,
"UnitPrice": 5000.0,
"LineTaxJurisdictions": [
    {
        "JurisdictionCode": "CF76BT01",
        "JurisdictionType": 21,
        "TaxAmount": 380.0,
        "TaxAmountSC": 380.0,
        "TaxAmountFC": 0.0,
        "TaxRate": 7.60,
        "DocEntry": 3357,
        "LineNumber": 0,
        "BaseSum": "The base value in table RDR4.BaseSum OR DRF4
...",
        "DeductTax": "The base value in table RDR4.DeductTax OR
DRF4 ...",

        "StaName": "TAX STA NAME (TAX 1 SAMPLE)",
        "Unencumbered": "tNO",
        "TaxInPrice": "tYES",
        "TaxOnRI": "tNO"
        "RowSequence": 0,
        "ExternalCalcTaxRate": 0.0,
        "ExternalCalcTaxAmount": 0.0,
        "ExternalCalcTaxAmountFC": 0.0,
        "ExternalCalcTaxAmountSC": 0.0,
        "U_Base": 100.0,
        "U_Isento": 0.0,
        "U_Outros": 0.0,
        "U_Minimo": 0.0,
        "U_Unidades": 0.0,
        "U_Medida": null,
        "U_PrecoMin": 0.0,
        "U_Moeda": null,
        "U_Lucro": 0.0,
        "U_Reducac1": 0.0,
        "U_Reducac2": 0.0,
        "U_ReducICMS": 0.0,
        "U_PrecoFix": 0.0,
        "U_FatorPrc": 0.0,
        "U_ExcAmtL": 0.0,
        "U_ExcAmtF": 0.0,
        "U_ExcAmtS": 0.0,

```

```

        "U_OthAmtL": 0.0,
        "U_OthAmtF": 0.0,
        "U_OthAmtS": 0.0,
        "U_TotalBL": 5000.0,
        "U_TotalBF": 0.0,
        "U_TotalBS": 5000.0
    },
    {
        "JurisdictionCode": "IC18BT01",
        "JurisdictionType": 10,
        "TaxAmount": 900.0,
        "TaxAmountSC": 900.0,
        "TaxAmountFC": 0.0,
        "TaxRate": 18.0,
        "DocEntry": 3357,
        "LineNumber": 0,
        "BaseSum": "The base value in table RDR4.BaseSum OR DRF4
...",
        "DeductTax": "The base value in table RDR4.DeductTax OR
DRF4 ...",

        "StaName": "TAX STA NAME (TAX 1 SAMPLE)",
        "Unencumbered": "tNO",
        "TaxInPrice": "tYES",
        "TaxOnRI": "tNO"
        "RowSequence": 1,
        "ExternalCalcTaxRate": 0.0,
        "ExternalCalcTaxAmount": 0.0,
        "ExternalCalcTaxAmountFC": 0.0,
        "ExternalCalcTaxAmountSC": 0.0,
        "U_Base": 100.0,
        "U_Isento": 0.0,
        "U_Outros": 0.0,
        "U_Minimo": 0.0,
        "U_Unidades": 0.0,
        "U_Medida": null,
        "U_PrecoMin": 0.0,
        "U_Moeda": null,
        "U_Lucro": 0.0,
        "U_Reducaol": 0.0,
        "U_Reducaao2": 0.0,
        "U_ReduICMS": 0.0,
        "U_PrecoFix": 0.0,
        "U_FatorPrc": 0.0,
        "U_ExcAmtL": 0.0,
        "U_ExcAmtF": 0.0,
        "U_ExcAmtS": 0.0,
        "U_OthAmtL": 0.0,
        "U_OthAmtF": 0.0,
        "U_OthAmtS": 0.0,
        "U_TotalBL": 5000.0,
    }
}

```



```

        "U_TotalBF": 0.0,
        "U_TotalBS": 5000.0
    },
    {
        "JurisdictionCode": "IP60BT01",
        "JurisdictionType": 16,
        "TaxAmount": 3000.0,
        "TaxAmountSC": 3000.0,
        "TaxAmountFC": 0.0,
        "TaxRate": 60.0,
        "DocEntry": 3357,
        "LineNumber": 0,
        "BaseSum": "The base value in table RDR4.BaseSum OR DRF4
...",
        "DeductTax": "The base value in table RDR4.DeductTax OR
DRF4 ...",

        "StaName": "TAX STA NAME (TAX 1 SAMPLE)",

        "Unencumbered": "tNO",
        "TaxInPrice": "tYES",
        "TaxOnRI": "tNO"

        "RowSequence": 2,
        "ExternalCalcTaxRate": 0.0,
        "ExternalCalcTaxAmount": 0.0,
        "ExternalCalcTaxAmountFC": 0.0,
        "ExternalCalcTaxAmountSC": 0.0,
        "U_Base": 100.0,
        "U_Isento": 0.0,
        "U_Outros": 0.0,
        "U_Minimo": 0.0,
        "U_Unidades": 0.0,
        "U_Medida": null,
        "U_PrecoMin": 0.0,
        "U_Moeda": null,
        "U_Lucro": 0.0,
        "U_Reducac1": 0.0,
        "U_Reducac2": 0.0,
        "U_ReducICMS": 0.0,
        "U_PrecoFix": 0.0,
        "U_FatorPrc": 0.0,
        "U_ExcAmtL": 0.0,
        "U_ExcAmtF": 0.0,
        "U_ExcAmtS": 0.0,
        "U_OthAmtL": 0.0,
        "U_OthAmtF": 0.0,
        "U_OthAmtS": 0.0,
        "U_TotalBL": 5000.0,
        "U_TotalBF": 0.0,
        "U_TotalBS": 5000.0
    }

```

```

    },
    {
        "JurisdictionCode": "PI16BT01",
        "JurisdictionType": 19,
        "TaxAmount": 82.50,
        "TaxAmountSC": 82.50,
        "TaxAmountFC": 0.0,
        "TaxRate": 1.650,
        "DocEntry": 3357,
        "LineNumber": 0,
        "BaseSum": "The base value in table RDR4.BaseSum OR DRF4
...",
        "DeductTax": "The base value in table RDR4.DeductTax OR
DRF4 ...",

        "StaName": "TAX STA NAME (TAX 1 SAMPLE)",
        "Unencumbered": "tNO",
        "TaxInPrice": "tYES",
        "TaxOnRI": "tNO"

        "RowSequence": 3,
        "ExternalCalcTaxRate": 0.0,
        "ExternalCalcTaxAmount": 0.0,
        "ExternalCalcTaxAmountFC": 0.0,
        "ExternalCalcTaxAmountSC": 0.0,
        "U_Base": 100.0,
        "U_Isento": 0.0,
        "U_Outros": 0.0,
        "U_Minimo": 0.0,
        "U_Unidades": 0.0,
        "U_Medida": null,
        "U_PrecoMin": 0.0,
        "U_Moeda": null,
        "U_Lucro": 0.0,
        "U_Reducacao1": 0.0,
        "U_Reducacao2": 0.0,
        "U_ReducacaoICMS": 0.0,
        "U_PrecoFix": 0.0,
        "U_FatorPrc": 0.0,
        "U_ExcAmtL": 0.0,
        "U_ExcAmtF": 0.0,
        "U_ExcAmtS": 0.0,
        "U_OthAmtL": 0.0,
        "U_OthAmtF": 0.0,
        "U_OthAmtS": 0.0,
        "U_TotalBL": 5000.0,
        "U_TotalBF": 0.0,
        "U_TotalBS": 5000.0
    }
]
},

```

```

{
  "ItemCode": "I0005_TAX_WTHOLDING",
  "ItemDescription": "WTHOLDING_TAX_SAMPLE",
  "Quantity": 1.0,
  "Price": 5000.0,
  "PriceAfterVAT": 9362.50,
  "DiscountPercent": 0.0,
  "WarehouseCode": "01",
  "SalesPersonCode": 2,
  "TaxCode": "5101-001",
  "NetTaxAmount": 3000.0,
  "NetTaxAmountFC": 0.0,
  "NetTaxAmountSC": 3000.0,
  "LineTotal": 5000.0,
  "TaxPercentagePerRow": 87.250,
  "TaxTotal": 3000.0,
  "UnitPrice": 5000.0,
  "LineTaxJurisdictions": [
    {
      "JurisdictionCode": "CF76BT01",
      "JurisdictionType": 21,
      "TaxAmount": 380.0,
      "TaxAmountSC": 380.0,
      "TaxAmountFC": 0.0,
      "TaxRate": 7.60,
      "DocEntry": 3357,
      "LineNumber": 1,
      "BaseSum": "The base value in table RDR4.BaseSum OR DRF4
...",
      "DeductTax": "The base value in table RDR4.DeductTax OR
DRF4 ...",

      "StaName": "TAX STA NAME (TAX 1 SAMPLE)",
      "Unencumbered": "tNO",
      "TaxInPrice": "tYES",
      "TaxOnRI": "tNO"

      "RowSequence": 4,
      "ExternalCalcTaxRate": 0.0,
      "ExternalCalcTaxAmount": 0.0,
      "ExternalCalcTaxAmountFC": 0.0,
      "ExternalCalcTaxAmountSC": 0.0,
      "U_Base": 100.0,
      "U_Isento": 0.0,
      "U_Outros": 0.0,
      "U_Minimo": 0.0,
      "U_Unidades": 0.0,
      "U_Medida": null,
      "U_PrecoMin": 0.0,
      "U_Moeda": null,
      "U_Lucro": 0.0,

```

```

        "U_Reducac1": 0.0,
        "U_Reducac2": 0.0,
        "U_ReducICMS": 0.0,
        "U_PrecFix": 0.0,
        "U_FatorPrc": 0.0,
        "U_ExcAmtL": 0.0,
        "U_ExcAmtF": 0.0,
        "U_ExcAmtS": 0.0,
        "U_OthAmtL": 0.0,
        "U_OthAmtF": 0.0,
        "U_OthAmtS": 0.0,
        "U_TotalBL": 5000.0,
        "U_TotalBF": 0.0,
        "U_TotalBS": 5000.0
    },
    {
        "JurisdictionCode": "IC18BT01",
        "JurisdictionType": 10,
        "TaxAmount": 900.0,
        "TaxAmountSC": 900.0,
        "TaxAmountFC": 0.0,
        "TaxRate": 18.0,
        "DocEntry": 3357,
        "LineNumber": 1,
        "BaseSum": "The base value in table RDR4.BaseSum OR DRF4
...",
        "DeductTax": "The base value in table RDR4.DeductTax OR
DRF4 ...",

        "StaName": "TAX STA NAME (TAX 1 SAMPLE)",

        "Unencumbered": "tNO",
        "TaxInPrice": "tYES",
        "TaxOnRI": "tNO"

        "RowSequence": 5,
        "ExternalCalcTaxRate": 0.0,
        "ExternalCalcTaxAmount": 0.0,
        "ExternalCalcTaxAmountFC": 0.0,
        "ExternalCalcTaxAmountSC": 0.0,
        "U_Base": 100.0,
        "U_Isento": 0.0,
        "U_Outros": 0.0,
        "U_Minimo": 0.0,
        "U_Unidades": 0.0,
        "U_Medida": null,
        "U_PrecMin": 0.0,
        "U_Moeda": null,
        "U_Lucro": 0.0,
        "U_Reducac1": 0.0,
        "U_Reducac2": 0.0,

```

```

        "U_ReducICMS": 0.0,
        "U_PrecFix": 0.0,
        "U_FatorPrc": 0.0,
        "U_ExcAmtL": 0.0,
        "U_ExcAmtF": 0.0,
        "U_ExcAmtS": 0.0,
        "U_OthAmtL": 0.0,
        "U_OthAmtF": 0.0,
        "U_OthAmtS": 0.0,
        "U_TotalBL": 5000.0,
        "U_TotalBF": 0.0,
        "U_TotalBS": 5000.0
    },
    {
        "JurisdictionCode": "IP60BT01",
        "JurisdictionType": 16,
        "TaxAmount": 3000.0,
        "TaxAmountSC": 3000.0,
        "TaxAmountFC": 0.0,
        "TaxRate": 60.0,
        "DocEntry": 3357,
        "LineNumber": 1,
        "BaseSum": "The base value in table RDR4.BaseSum OR DRF4
...",
        "DeductTax": "The base value in table RDR4.DeductTax OR
DRF4 ...",

        "StaName": "TAX STA NAME (TAX 1 SAMPLE)",

        "Unencumbered": "tNO",
        "TaxInPrice": "tYES",
        "TaxOnRI": "tNO"

        "RowSequence": 6,
        "ExternalCalcTaxRate": 0.0,
        "ExternalCalcTaxAmount": 0.0,
        "ExternalCalcTaxAmountFC": 0.0,
        "ExternalCalcTaxAmountSC": 0.0,
        "U_Base": 100.0,
        "U_Isento": 0.0,
        "U_Outros": 0.0,
        "U_Minimo": 0.0,
        "U_Unidades": 0.0,
        "U_Medida": null,
        "U_PrecMin": 0.0,
        "U_Moeda": null,
        "U_Lucro": 0.0,
        "U_Reducac1": 0.0,
        "U_Reducac2": 0.0,
        "U_ReducICMS": 0.0,
        "U_PrecFix": 0.0,

```

```

        "U_FatorPrc": 0.0,
        "U_ExcAmtL": 0.0,
        "U_ExcAmtF": 0.0,
        "U_ExcAmtS": 0.0,
        "U_OthAmtL": 0.0,
        "U_OthAmtF": 0.0,
        "U_OthAmtS": 0.0,
        "U_TotalBL": 5000.0,
        "U_TotalBF": 0.0,
        "U_TotalBS": 5000.0
    },
    {
        "JurisdictionCode": "PI16BT01",
        "JurisdictionType": 19,
        "TaxAmount": 82.50,
        "TaxAmountSC": 82.50,
        "TaxAmountFC": 0.0,
        "TaxRate": 1.650,
        "DocEntry": 3357,
        "LineNumber": 1,
        "BaseSum": "The base value in table RDR4.BaseSum OR DRF4
...",
        "DeductTax": "The base value in table RDR4.DeductTax OR
DRF4 ...",

        "StaName": "TAX STA NAME (TAX 1 SAMPLE)",

        "Unencumbered": "tNO",
        "TaxInPrice": "tYES",
        "TaxOnRI": "tNO"

        "RowSequence": 7,
        "ExternalCalcTaxRate": 0.0,
        "ExternalCalcTaxAmount": 0.0,
        "ExternalCalcTaxAmountFC": 0.0,
        "ExternalCalcTaxAmountSC": 0.0,
        "U_Base": 100.0,
        "U_Isento": 0.0,
        "U_Outros": 0.0,
        "U_Minimo": 0.0,
        "U_Unidades": 0.0,
        "U_Medida": null,
        "U_PrecoMin": 0.0,
        "U_Moeda": null,
        "U_Lucro": 0.0,
        "U_Reducac1": 0.0,
        "U_Reducac2": 0.0,
        "U_ReducICMS": 0.0,
        "U_PrecoFix": 0.0,
        "U_FatorPrc": 0.0,
        "U_ExcAmtL": 0.0,

```

```

        "U_ExcAmtF": 0.0,
        "U_ExcAmtS": 0.0,
        "U_OthAmtL": 0.0,
        "U_OthAmtF": 0.0,
        "U_OthAmtS": 0.0,
        "U_TotalBL": 5000.0,
        "U_TotalBF": 0.0,
        "U_TotalBS": 5000.0
    }
],

    "WithholdingTaxLines": [
        {
            "WTCODE": "S001",

            "Unencumbered": "tNO",
            "TaxInPrice": "tYES",
            "TaxOnRI": "tNO",
            "WTAmountSys": 52.0,
            "WTAmountFC": 0.0,
            "WTAmount": 52.0,
            "WithholdingType": null,
            "TaxableAmountinSys": 8000.0,
            "TaxableAmountFC": 0.0,
            "TaxableAmount": 8000.0,
            "RoundingType": null,
            "Rate": 0.650,
            "Criteria": "N",
            "Category": "P",
            "BaseType": "G",
            "AppliedWTAmountSys": 0.0,
            "AppliedWTAmountFC": 0.0,
            "AppliedWTAmount": 0.0,
            "GLAccount": "1.01.03.06.07",
            "LineNum": 0,
            "BaseDocEntry": -1,
            "BaseDocLine": null,
            "BaseDocType": 0,
            "BaseDocumentReference": null,
            "Status": "bost_Open",
            "TargetAbsEntry": -1,
            "TargetDocumentType": null,
            "CSTCodeIncoming": null,
            "CSTCodeOutgoing": null,
            "DocLineNum": 1
        },
        {
            "WTCODE": "S006",
            "Unencumbered": "tNO",
            "TaxInPrice": "tYES",
            "TaxOnRI": "tNO",

```

```

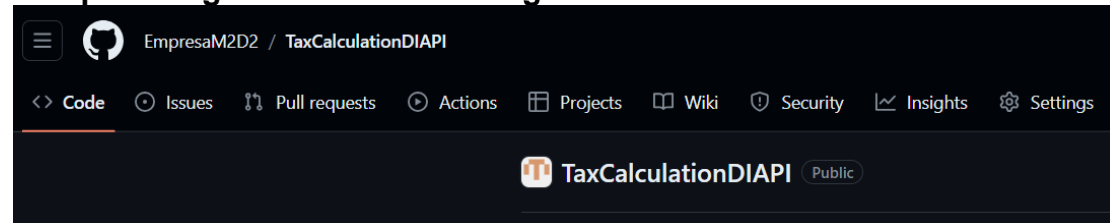
        "WTAmtSys": 400.0,
        "WTAmtFC": 0.0,
        "WTAmt": 400.0,
        "WithholdingType": null,
        "TaxableAmtInSys": 5000.0,
        "TaxableAmtFC": 0.0,
        "TaxableAmt": 5000.0,
        "RoundingType": null,
        "Rate": 8.0,
        "Criteria": "N",
        "Category": "P",
        "BaseType": "N",
        "AppliedWTAmtSys": 0.0,
        "AppliedWTAmtFC": 0.0,
        "AppliedWTAmt": 0.0,
        "GLAccount": "1.01.03.06.06",
        "LineNum": 1,
        "BaseDocEntry": -1,
        "BaseDocLine": null,
        "BaseDocType": 0,
        "BaseDocumentReference": null,
        "Status": "bost_Open",
        "TargetAbsEntry": -1,
        "TargetDocumentType": null,
        "CSTCodeIncoming": null,
        "CSTCodeOutgoing": null,
        "DocLineNum": 1
    }
}
    ]
}

```



The main goal is sending a sale document, the SAP Service Layer just generate a DRAFT without save it and return this DRAFT. When we are using DI API we made something similar. We open a transaction creating a DRAFT, we get (sum) all taxes values e we rollback this transaction.

**Sample using SAP SDK DI API in github:**



<https://github.com/EmpresaM2D2/TaxCalculationDIAPublic/tree/main>

The problem is: **A huge overhead (very slow) and generating overhead in the database system once many of the DocNum numbers are lost.**

The sample what we need in DI API but we need the same in Service Layer with performance:

After request in SL we just want to a return like:

```
SELECT
    DRF4.LineNum,
    DRF1.ItemCode,
    DRF4.TaxRate,
    DRF4."staType", OSTT."Name" AS "TaxType", OSTC."Code", OSTC."Name" AS
"TaxName",
    DRF4."StcCode", DRF4."StaCode", DRF4."TaxSum", DRF4."TaxSumFrgn",
DRF4."BaseSumSys",
    DRF4."BaseSum", DRF4."DeductTax", DRF4."DdctTaxFrg", DRF4."DdctTaxSys",
DRF4."BaseAppld",
    DRF4."InGrossRev",
    DRF4."TaxInPrice", --very important
    DRF4."Unencumbrd", --very important, In Brazil called "Desonerado" it is similar a
discount
    DRF4."TaxSumOrg", DRF4."TaxSumOrgS", DRF4."TaxOnRI", DRF4."InFirstIns",
DRF4."ExtTaxRate", DRF4."ExtTaxSum",
    DRF4."TaxAmtSrc", DRF4."ExtTaxSumF", DRF4."U_Base",
DRF4."U_Isento", DRF4."U_Outros", DRF4."U_Minimo",
    DRF4."U_Unidades", DRF4."U_Medida", DRF4."U_Moeda",
DRF4."U_Lucro", DRF4."U_Reducacao1", DRF4."U_Reducacao2", DRF4."U_ReducacaoCMS",
DRF4."U_PrecoFix", DRF4."U_FatorPrc", DRF4."U_ExcAmtL", DRF4."U_ExcAmtF",
DRF4."U_ExcAmtS", DRF4."U_OthAmtL", DRF4."U_OthAmtF", DRF4."U_OthAmtS",
DRF4."U_TotalBL", DRF4."U_TotalBF", DRF4."U_TotalBS"
FROM DRF4
    INNER JOIN
    DRF1 ON DRF1."LineNum" = DRF4."LineNum" AND DRF1."DocEntry" = DRF4."DocEntry"
    INNER JOIN
    OSTC ON OSTC."Code" = DRF1."TaxCode" INNER JOIN OSTT ON OSTT."AbsId" =
DRF4."staType" WHERE DRF4."DocEntry" = 9
```