ABAP Cloud

A Life after the Report

Software-Heroes

Agenda

1. ABAP Cloud
2. Möglichkeiten
3. Hands-On
4. Zusammenfassung

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ABAP Cloud

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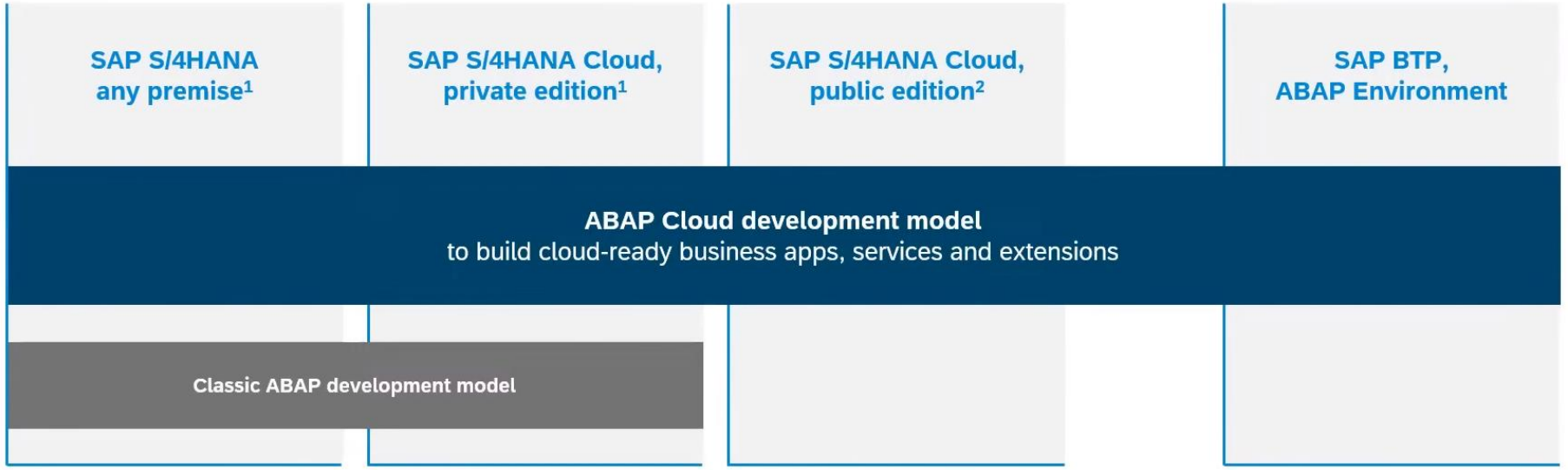
ABAP Cloud

Entwicklungsmodell für alle Systeme



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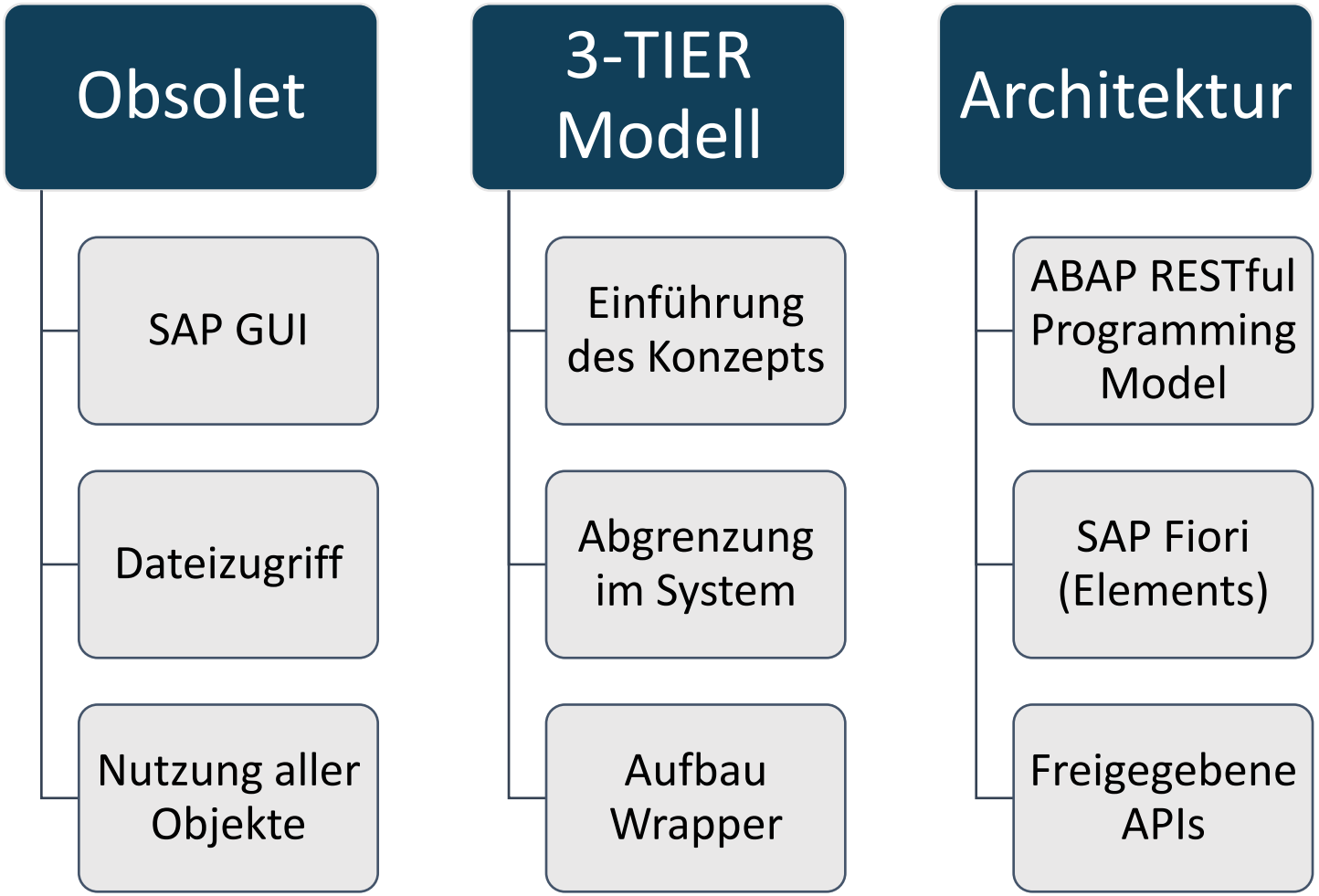

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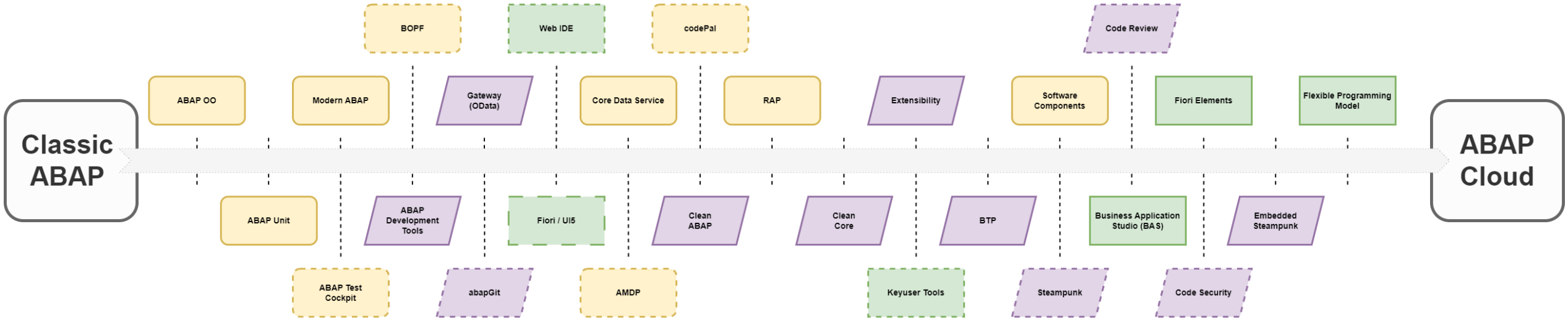
Die Reise beginnt …



→ Learning Roadmap

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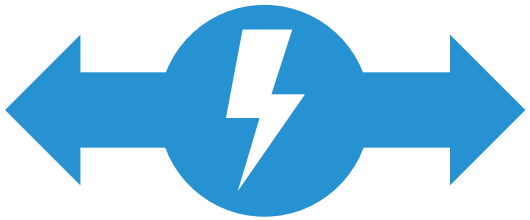
ABAP Cloud

Angst

- Entwicklungsstil muss geändert werden
- Nicht mehr alles im System nutzbar
- Komplett neu lernen



Chance

- Make ABAP schlank again
  - Statements
  - APIs
  - Technologie
- Einfacher Einstieg

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Möglichkeiten

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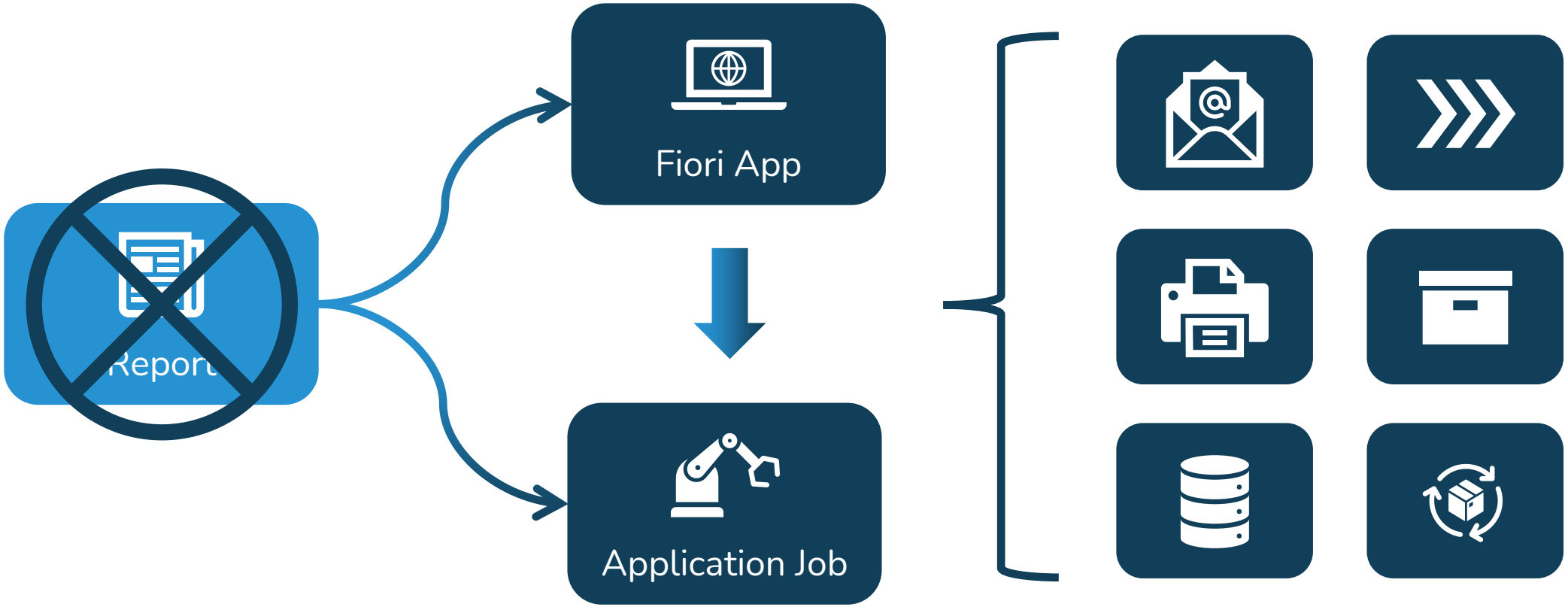
Möglichkeiten

Classic ABAP

ABAP Cloud

Freigegebene APIs



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Möglichkeiten

- ABAP RESTful Programming Model (RAP) mit Fiori (Elements)
- Verschiedene Pattern zur Integration möglich
  - Klassisch
  - Report
  - Custom
  - Hybrid
  - API
  - Singleton

- Entwicklung von klassenbasierten Verarbeitungen
- Ausgabe von Meldungen als Application Log
- Einplanung über Job App oder per API

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Hands-On

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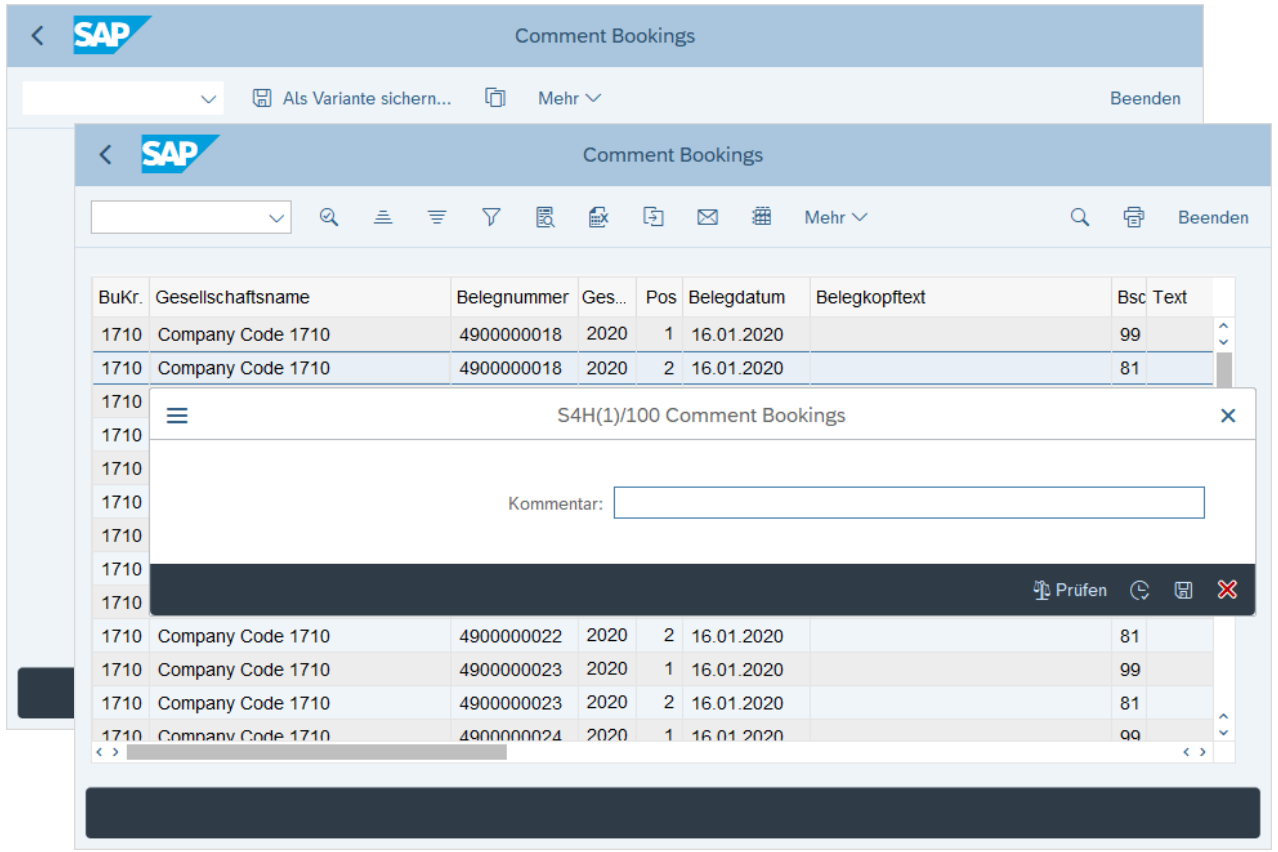
Hands-On

Das Szenario

- Migration einer ALV-Anwendung zu Fiori Elements
  - Auswertungsreport von Belegen
  - Anreicherung von Zusatzinformationen
- Implementierung des „Report Pattern“



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Hands-On

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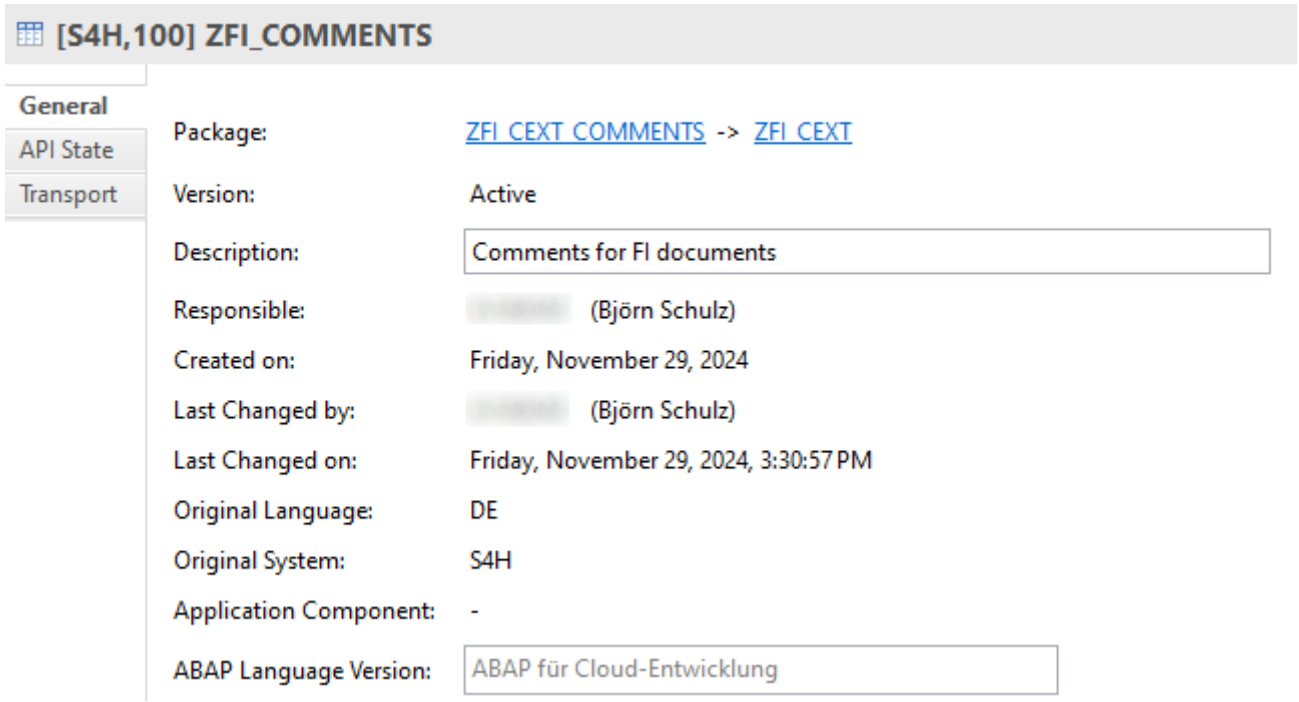
Hands-On (Backup)

- Schritt: Migration der Tabelle



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Hands-On (Backup)

- Schritt: Erstellung Base-View

[S4H, 100] ZFI_B_BKPCOMMENTS

```
@AccessControl.authorizationCheck: #NOT_REQUIRED
@EndUserText.label: 'Comments'
define view entity ZFI_B_BKPComments
  as select from zfi_comments
{
  key bukrs       as CompanyCode,
  key belnr       as AccountingDocument,
  key gjahr       as FiscalYear,
  key buzei       as AccountingDocumentItem,
      commt       as DocumentComment,
      create_user as CreationUser,
      create_time as CreationTime
}
```

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Hands-On (Backup)

- Schritt: Erstellung ROOT der App

[S4H,100] ZFI_R_BKPDOCUMENTCOMMENTS

```
@AccessControl.authorizationCheck: #NOT_REQUIRED
@EndUserText.label: 'Comments for FI Documents'
define root view entity ZFI_R_BKPDocumentComments
  as select from I_OperationalAcctgDocItem
  association [0..1] to ZFI_B_BKPComments as _Comment on  _Comment.CompanyCode            = $projection.CompanyCode
                                                      and _Comment.AccountingDocument     = $projection.AccountingDocument
                                                      and _Comment.FiscalYear             = $projection.FiscalYear
                                                      and _Comment.AccountingDocumentItem = $projection.AccountingDocumentItem
{
  key CompanyCode,
  key AccountingDocument,
  key FiscalYear,
  key AccountingDocumentItem,
      _CompanyCode.CompanyCodeName,
      _JournalEntry.DocumentDate,
      _JournalEntry.AccountingDocumentHeaderText,
      PostingKey,
      DocumentItemText,
      CostCenter,
      _Comment.DocumentComment
}
```

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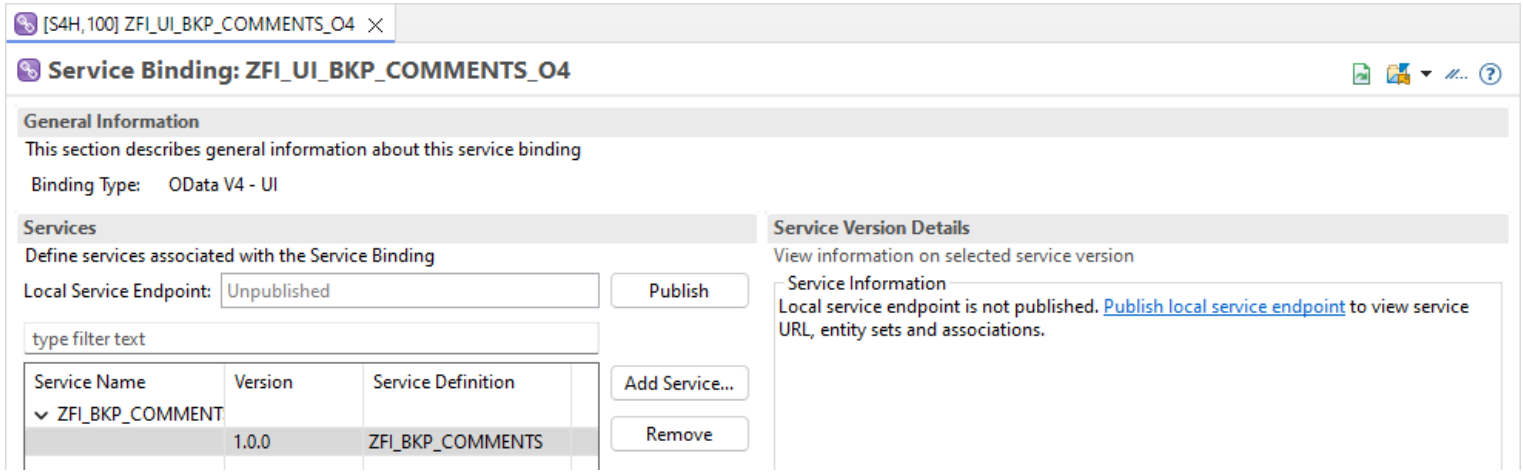
Hands-On (Backup)

- Schritt: Erstellung Service

[S4H, 100] ZFI_BKP_COMMENTS

```
1  @EndUserText.label: 'Comments Service'
2  define service ZFI_BKP_COMMENTS {
3    expose ZFI_R_BKPDocumentComments as DocumentComments;
4  }
```



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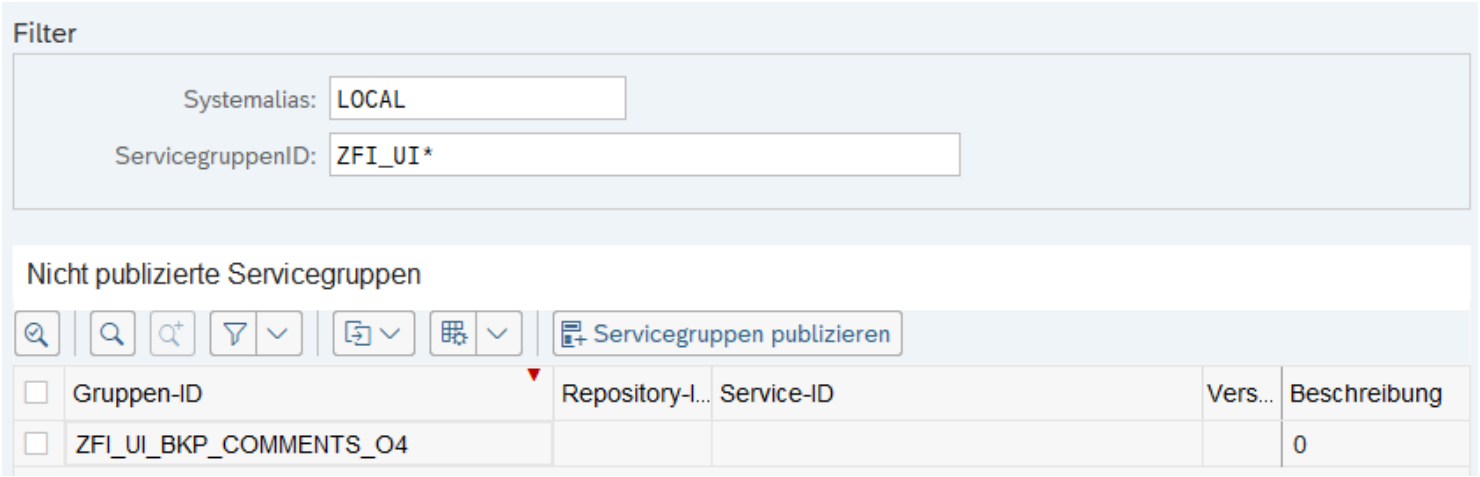
Hands-On (Backup)

- Schritt: Freigabe des Services



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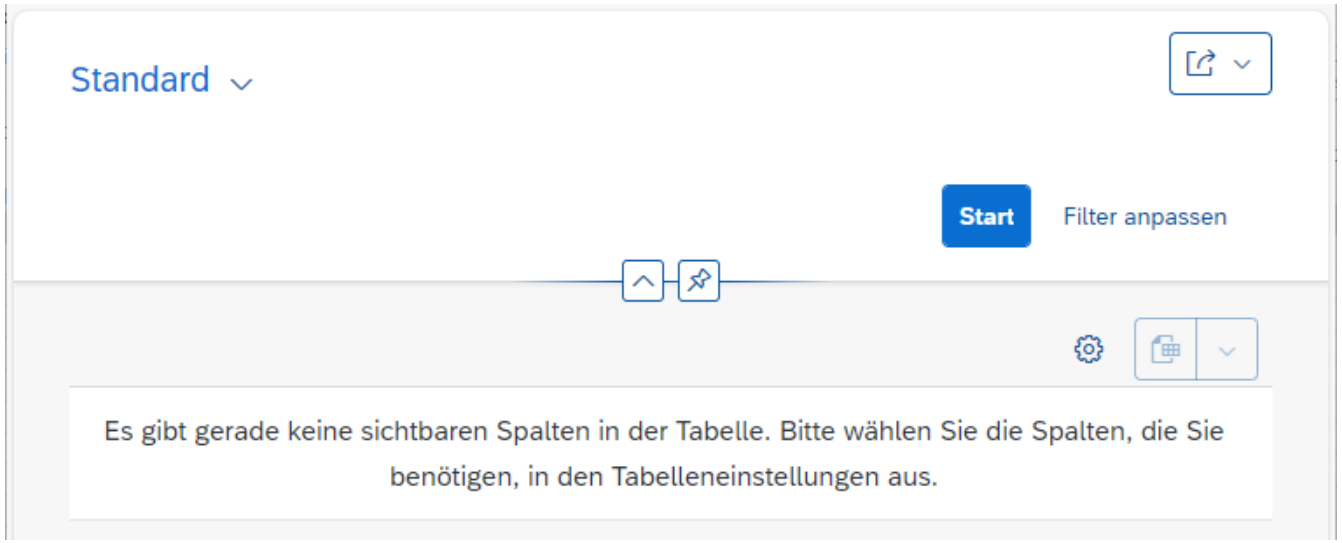
Hands-On (Backup)

- Zwischenstand: Service aufrufbar



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Hands-On (Backup)

- Schritt: Erstellung Projektions-View

[S4H, 100] ZFI_C_BKPDOCUMENTCOMMENTS

```
@AccessControl.authorizationCheck: #NOT_REQUIRED
@EndUserText.label: 'Consumption View'
@Metadata.allowExtensions: true
define root view entity ZFI_C_BKPDocumentComments
  provider contract transactional_query
  as projection on ZFI_R_BKPDocumentComments
{
  key CompanyCode,
  key AccountingDocument,
  key FiscalYear,
  key AccountingDocumentItem,
      CompanyCodeName,
      DocumentDate,
      AccountingDocumentHeaderText,
      PostingKey,
      DocumentItemText,
      CostCenter,
      DocumentComment
}

```

[S4H, 100] ZFI_BKP_COMMENTS

```
@EndUserText.label: 'Comments Service'
define service ZFI_BKP_COMMENTS {
  expose ZFI_C_BKPDocumentComments as DocumentComments;
}
```

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Hands-On (Backup)

- Schritt: Metadata

[S4H,100] ZFI_C_BKPDOCUMENTCOMMENTS

```
@Metadata.layer: #CUSTOMER
annotate entity ZFI_C_BKPDocumentComments
  with
{

  @UI            : {
    selectionField: [{ position: 10 }],
    lineItem    : [
      { position: 10 },
      { type: #FOR_ACTION, dataAction: 'setComment',label: 'Set comment' } ]
  }
  CompanyCode;

  @UI            : {
    selectionField: [{ position: 20 }],
    lineItem    : [{ position: 30 }]
  }
  AccountingDocument;

  @UI            : {
    selectionField: [{ position: 30 }],
    lineItem    : [{ position: 40 }]
  }
  FiscalYear;

  @UI            : {
    lineItem    : [{ position: 50 }]
  }
  AccountingDocumentItem;

  @UI            : {
    lineItem    : [{ position: 20 }]
  }
  CompanyCodeName;
```

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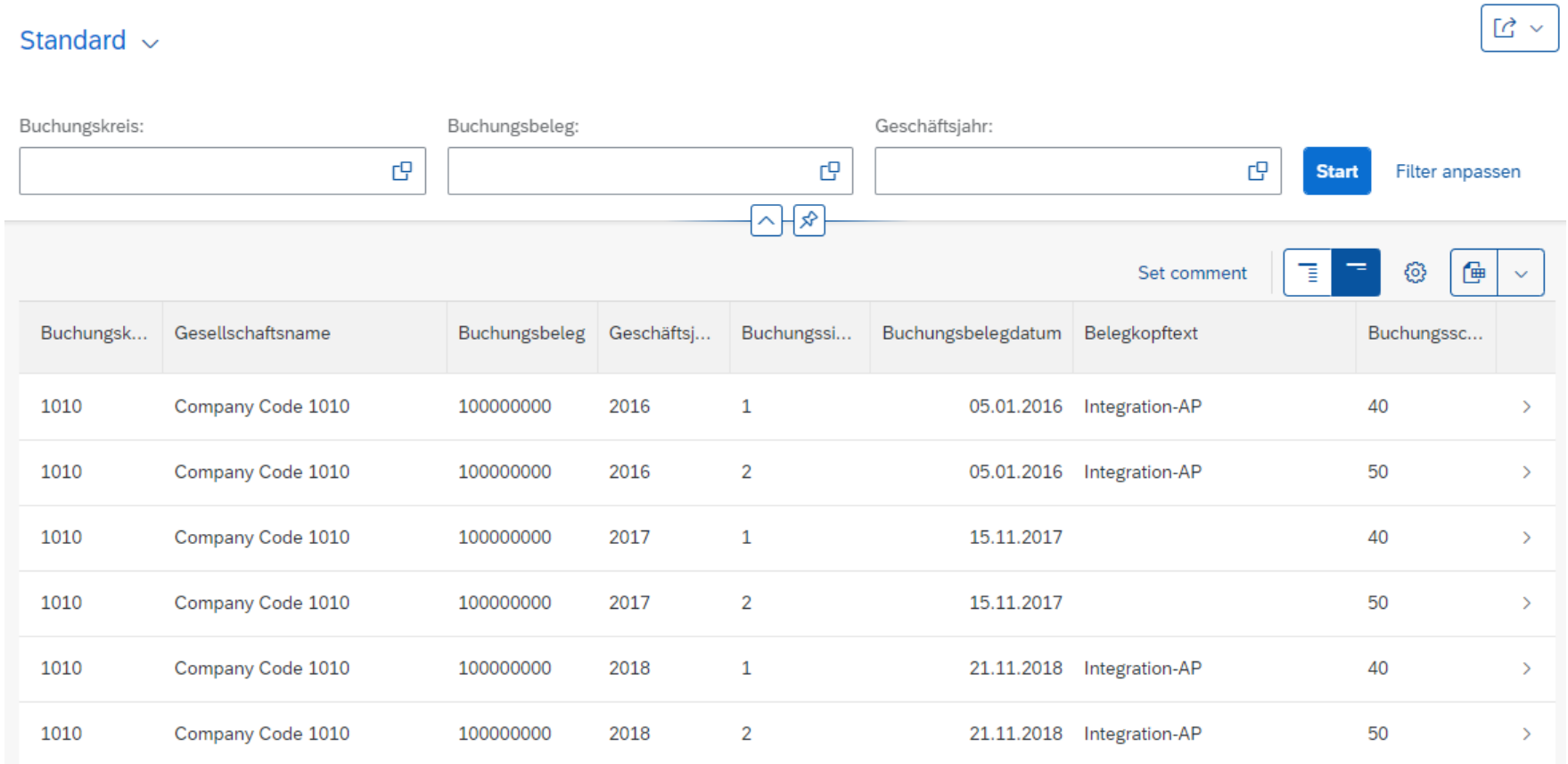
Hands-On (Backup)

- Zwischenstand: UI vorhanden



Buchungsk...	Gesellschaftsname	Buchungsbeleg	Geschäftsj...	Buchungssi...	Buchungsbelegdatum	Belegkopftext	Buchungssc...
1010	Company Code 1010	100000000	2016	1	05.01.2016	Integration-AP	40
1010	Company Code 1010	100000000	2016	2	05.01.2016	Integration-AP	50
1010	Company Code 1010	100000000	2017	1	15.11.2017		40
1010	Company Code 1010	100000000	2017	2	15.11.2017		50
1010	Company Code 1010	100000000	2018	1	21.11.2018	Integration-AP	40
1010	Company Code 1010	100000000	2018	2	21.11.2018	Integration-AP	50

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Hands-On (Backup)

- Schritt: Entität für Popup

[S4H, 100] ZFI_S_BKPCOMMENTPOPUP

```
1  @EndUserText.label: 'Popup for Comment'
2  define abstract entity ZFI_S_BKPCommentPopUp
3  {
4    @EndUserText.label: 'Comment'
5    DocumentComment : abap.string;
6  }
7
```

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Hands-On (Backup)

- Schritt: Verhalten (Root)

[S4H, 100] ZFI_R_BKPDOCUMENTCOMMENTS

```
1  managed implementation in class zbp_fi_bkp_document unique;
2  strict ( 2 );
3
4  define behavior for ZFI_R_BKPDocumentComments alias Comment
5  with unmanaged save
6  lock master
7  authorization master ( instance )
8  {
9    update;
10
11   action setComment parameter ZFI_S_BKPCommentPopUp result [1] $self;
12 }
```

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Hands-On (Backup)

- Schritt: Implementierung des Verhaltens

```
METHOD setComment.
  READ ENTITIES OF ZFI_R_BKPDocumentComments IN LOCAL MODE
       ENTITY Comment ALL FIELDS WITH CORRESPONDING #( keys )
       RESULT DATA(lt_data).

  LOOP AT lt_data INTO DATA(ls_data).
    DATA(ls_key) = keys[ %tky = ls_data-%tky ].

    MODIFY ENTITIES OF ZFI_R_BKPDocumentComments IN LOCAL MODE
           ENTITY Comment UPDATE FROM VALUE #( ( %tky                   = ls_data-%tky
                                                 DocumentComment        = ls_key-%param-DocumentComment
                                                 %control-DocumentComment = if_abap_behv=>mk-on ) ).
  ENDLOOP.

  READ ENTITIES OF ZFI_R_BKPDocumentComments IN LOCAL MODE
       ENTITY Comment ALL FIELDS WITH CORRESPONDING #( keys )
       RESULT DATA(lt_update).

  result = VALUE #( FOR ls_update IN lt_update
                  ( %tky = ls_update-%tky %param = CORRESPONDING #( ls_update ) ) ).
ENDMETHOD.
```

```
METHOD save_modified.
  LOOP AT update-comment INTO DATA(ls_comment).
    MODIFY zfi_comments FROM @( VALUE #( bukrs       = ls_comment-CompanyCode
                                         belnr       = ls_comment-AccountingDocument
                                         gjahr       = ls_comment-FiscalYear
                                         buzei       = ls_comment-AccountingDocumentItem
                                         commt       = ls_comment-DocumentComment
                                         create_user = cl_abap_context_info=>get_user_technical_name( )
                                         create_time = utclong_current( ) ) ).
  ENDLOOP.
ENDMETHOD.
```

```
@UI            : {
  selectionField: [{ position: 10 }],
  lineItem    : [
    { position: 10 },
    { type: #FOR_ACTION, dataAction: 'setComment',label: 'Set comment' }
  ]
}
CompanyCode;
```

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Hands-On (Backup)

- Schritt: Verhalten (Projektion)

[S4H, 100] ZFI_C_BKPDOCUMENTCOMMENTS

```
1  projection;
2  strict ( 2 );
3
4  define behavior for ZFI_C_BKPDocumentComments alias Comments
5  {
6    use action setComment;
7  }
```

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Hands-On (Backup)

- Schritt: Access Control (Root)

[S4H,100] ZFI_R_BKPDOCUMENTCOMMENTS

```
@EndUserText.label: 'ACL for Root'
@MappingRole: true
define role ZFI_R_BKPDocumentComments {
  grant
    select
      on
        ZFI_R_BKPDocumentComments
          where
            ( CompanyCode ) = aspect pfcg_auth ( F_BKPF_BUK, BUKRS , ACTVT = '03' );

}
```

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Hands-On (Backup)

- Schritt: Access Control (Consumption)

[S4H, 100] ZFI_C_BKPDOCUMENTCOMMENTS

```
@EndUserText.label: 'ACL for Consumption'
@MappingRole: true
define role ZFI_C_BKPDocumentComments {
  grant
    select
      on
        ZFI_C_BKPDocumentComments
          where
            inheriting conditions from entity ZFI_R_BKPDocumentComments;

}
```

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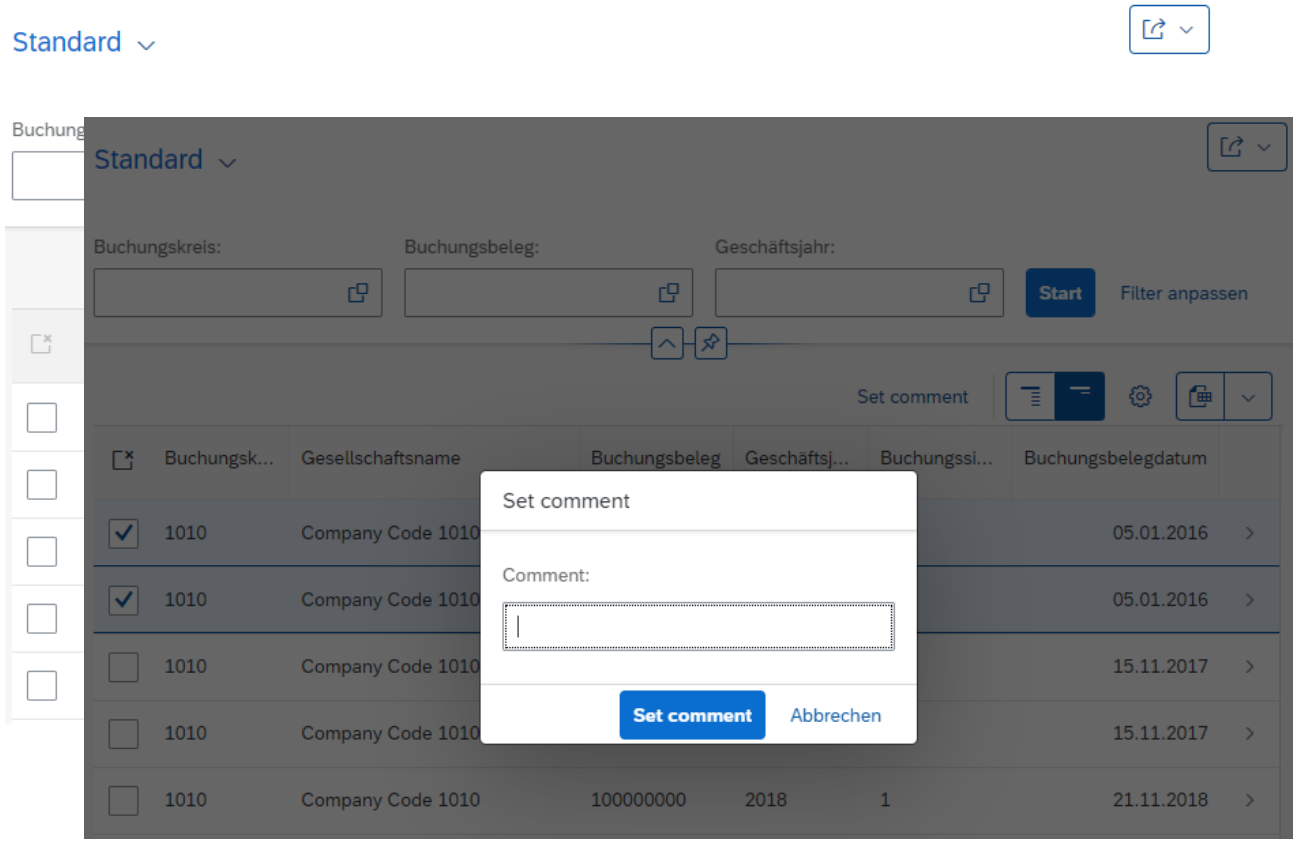
Hands-On

Das Ergebnis

- Implementierung der Fiori Anwendung
- Umsetzung der Funktionalität

→ Clean Core / Cloud Ready



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Zusammenfassung

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Zusammenfassung

Entwickler

- Schulung der Entwickler
- Verständnis von RAP
- Entwicklungs-werkzeuge

Strategie

- Zerlegen von komplexen Anwendungen
- Nutzung des 3-TIER Modells

Migration

- Gängige Pfade und Pattern verwenden
- Fiori Elements für schnelle Ergebnisse

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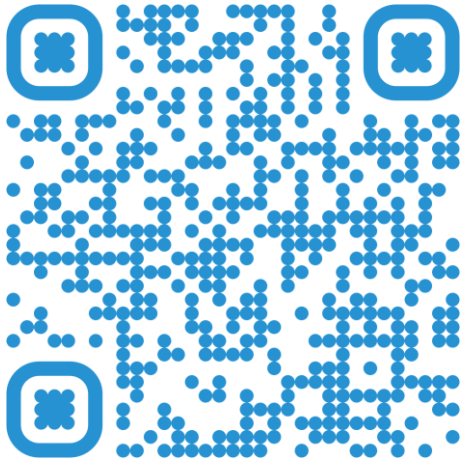
Danke

Download



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