

ABAP Cloud

A Life after the Report

Agenda

1. ABAP Cloud
2. Möglichkeiten
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4. Zusammenfassung

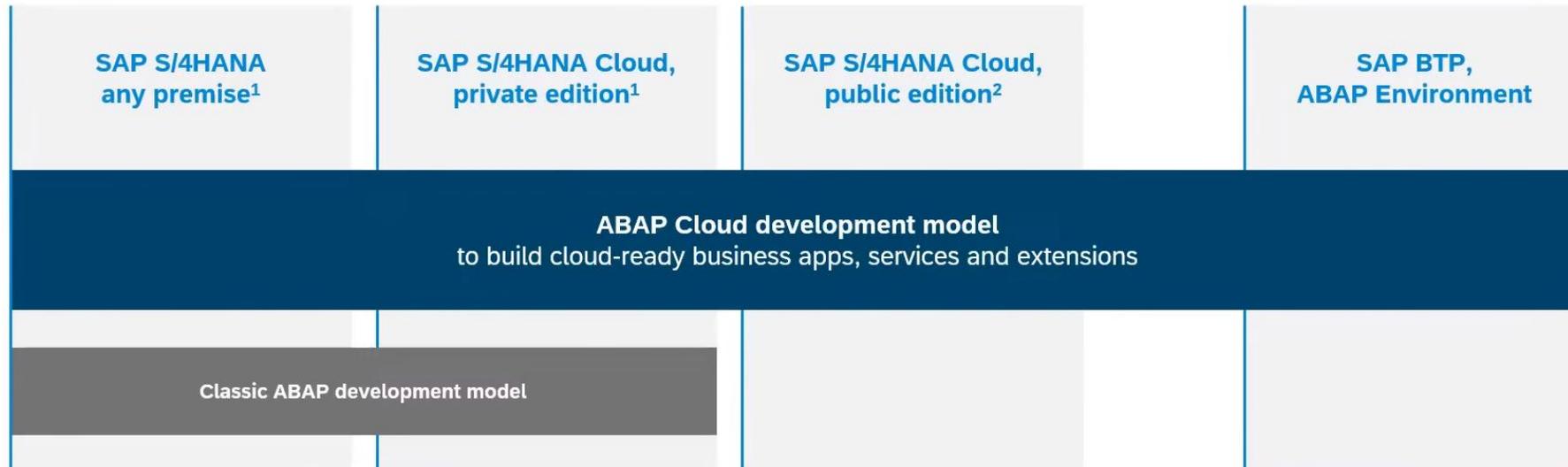
ABAP Cloud



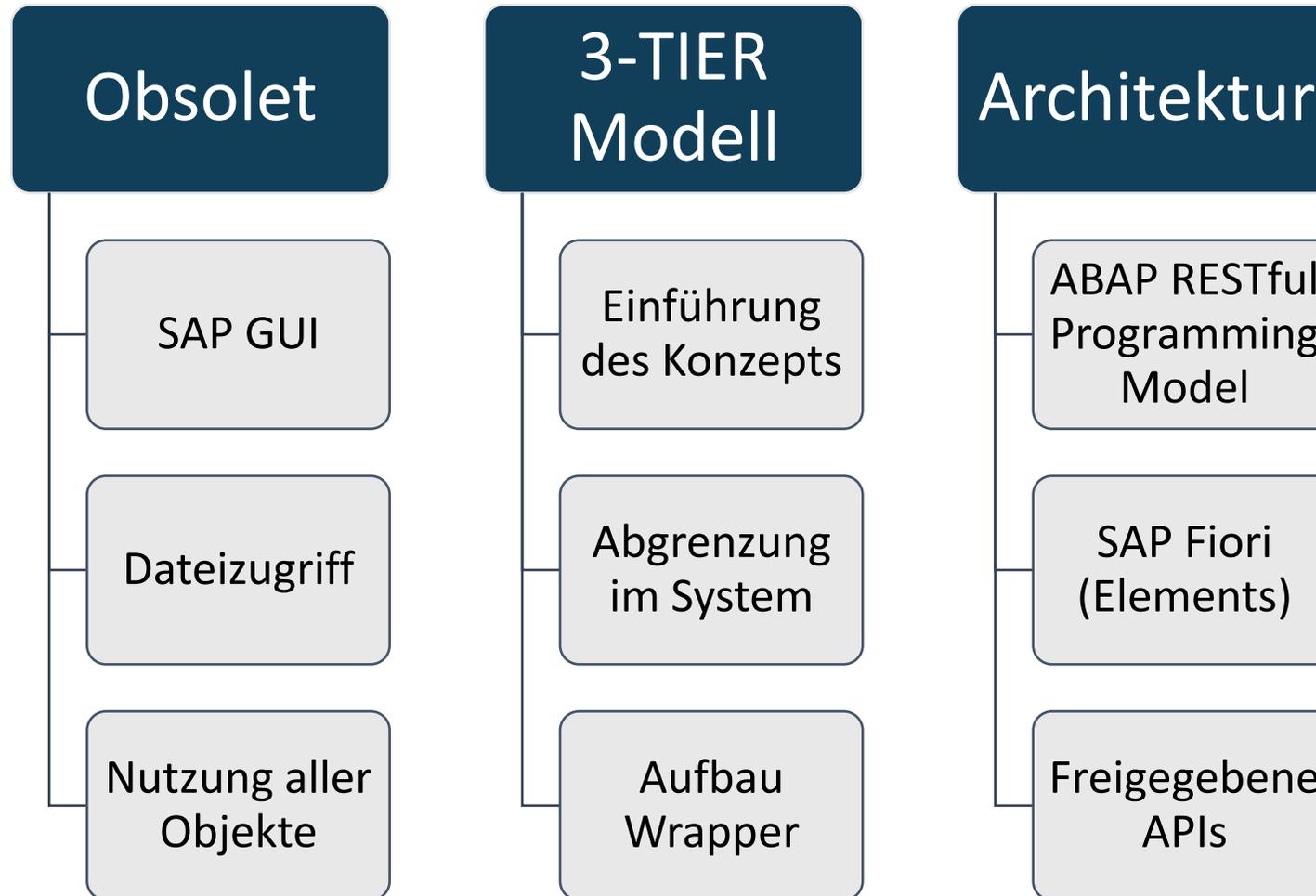
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ABAP Cloud

Entwicklungsmodell für alle Systeme

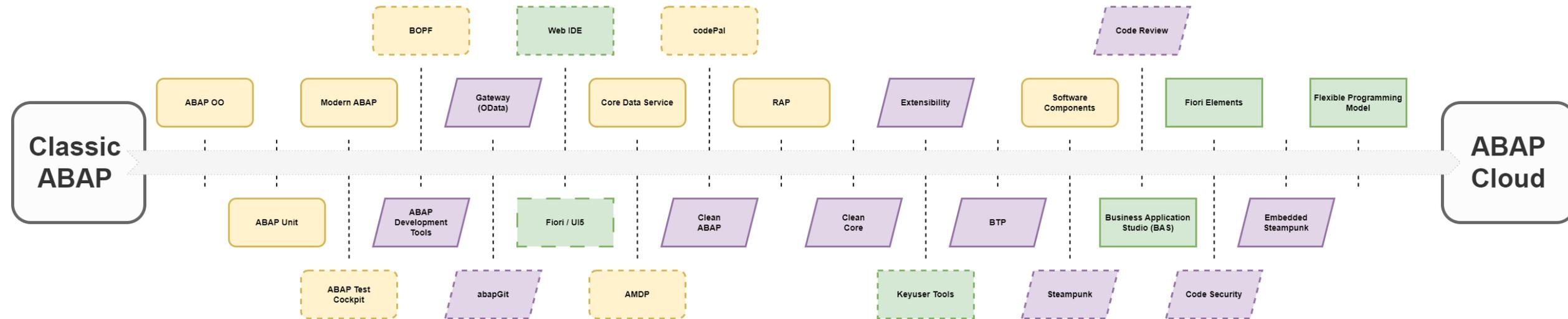


ABAP Cloud



ABAP Cloud

Die Reise beginnt ...



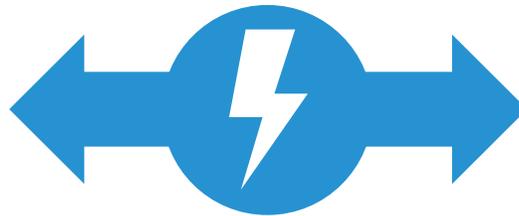
→ [Learning Roadmap](#)

ABAP Cloud



Angst

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



Chance

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

Möglichkeiten

HERE

THERE

EVERYWHERE

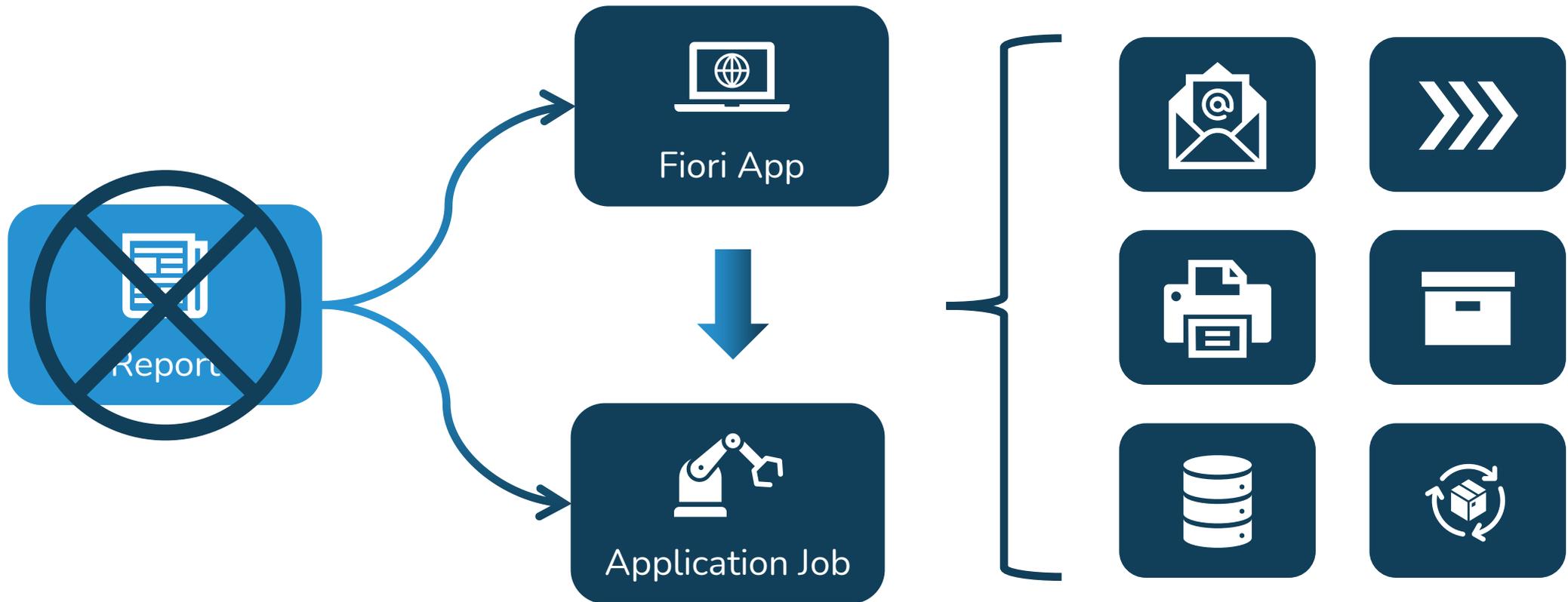
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Möglichkeiten

Classic ABAP

ABAP Cloud

Freigegebene APIs



Möglichkeiten



Fiori App



Application Job

- 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



Hands-On

Foto von Nick Fewings auf Unsplash

Hands-On

Das Szenario

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

The screenshot displays the SAP Fiori 'Comment Bookings' application. The main view shows a table with columns: BuKr., Gesellschaftsname, Belegnummer, Ges., Pos, Belegdatum, Belegkopftext, and Bsc Text. The table contains several rows of booking data. A dialog box titled 'S4H(1)/100 Comment Bookings' is open, showing a 'Kommentar:' field for entering a comment. The dialog also includes a 'Prüfen' button and a close button.

BuKr.	Gesellschaftsname	Belegnummer	Ges.	Pos	Belegdatum	Belegkopftext	Bsc Text
1710	Company Code 1710	4900000018	2020	1	16.01.2020		99
1710	Company Code 1710	4900000018	2020	2	16.01.2020		81
1710	Company Code 1710	4900000022	2020	2	16.01.2020		81
1710	Company Code 1710	4900000023	2020	1	16.01.2020		99
1710	Company Code 1710	4900000023	2020	2	16.01.2020		81
1710	Company Code 1710	4900000024	2020	1	16.01.2020		99

Hands-On



Hands-On (Backup)

- Schritt: Migration der Tabelle

[S4H,100] ZFI_COMMENTS

General
API State
Transport

Package: [ZFI_CEXT COMMENTS](#) -> [ZFI_CEXT](#)

Version: Active

Description: Comments for FI documents

Responsible: (Björn Schulz)

Created on: Friday, November 29, 2024

Last Changed by: (Björn Schulz)

Last Changed on: Friday, November 29, 2024, 3:30:57 PM

Original Language: DE

Original System: S4H

Application Component: -

ABAP Language Version: ABAP für Cloud-Entwicklung

Hands-On (Backup)

- Schritt: Erstellung Base-View

```
D [S4H,100] ZFI_B_BKPCOMMENTS ×  
1 @AccessControl.authorizationCheck: #NOT_REQUIRED  
2 @EndUserText.label: 'Comments'  
3 define view entity ZFI_B_BKPComments  
4   as select from zfi_comments  
5   {  
6     key bukrs      as CompanyCode,  
7     key belnr      as AccountingDocument,  
8     key gjahr      as FiscalYear,  
9     key buzei      as AccountingDocumentItem,  
10    commt          as DocumentComment,  
11    create_user    as CreationUser,  
12    create_time    as CreationTime  
13  }
```

Hands-On (Backup)

- Schritt: Erstellung ROOT der App

```
D [S4H,100] ZFI_R_BKPDOCUMENTCOMMENTS x
1 @AccessControl.authorizationCheck: #NOT_REQUIRED
2 @EndUserText.label: 'Comments for FI Documents'
3 define root view entity ZFI_R_BKPDocumentComments
4   as select from I_OperationalAcctgDocItem
5   association [0..1] to ZFI_B_BKPComments as _Comment on  _Comment.CompanyCode           = $projection.CompanyCode
6                                                         and  _Comment.AccountingDocument       = $projection.AccountingDocument
7                                                         and  _Comment.FiscalYear               = $projection.FiscalYear
8                                                         and  _Comment.AccountingDocumentItem = $projection.AccountingDocumentItem
9   {
10    key CompanyCode,
11    key AccountingDocument,
12    key FiscalYear,
13    key AccountingDocumentItem,
14    _CompanyCode.CompanyCodeName,
15    _JournalEntry.DocumentDate,
16    _JournalEntry.AccountingDocumentHeaderText,
17    PostingKey,
18    DocumentItemText,
19    CostCenter,
20    _Comment.DocumentComment
21  }
```

Hands-On (Backup)

- Schritt: Erstellung Service

```
[S4H,100] ZFI_BKP_COMMENTS x  
1 @EndUserText.label: 'Comments Service'  
2 define service ZFI_BKP_COMMENTS {  
3   expose ZFI_R_BKPDokumentComments as DocumentComments;  
4 }
```

[S4H,100] ZFI_UI_BKP_COMMENTS_O4 x

Service Binding: ZFI_UI_BKP_COMMENTS_O4

General Information
This section describes general information about this service binding
Binding Type: OData V4 - UI

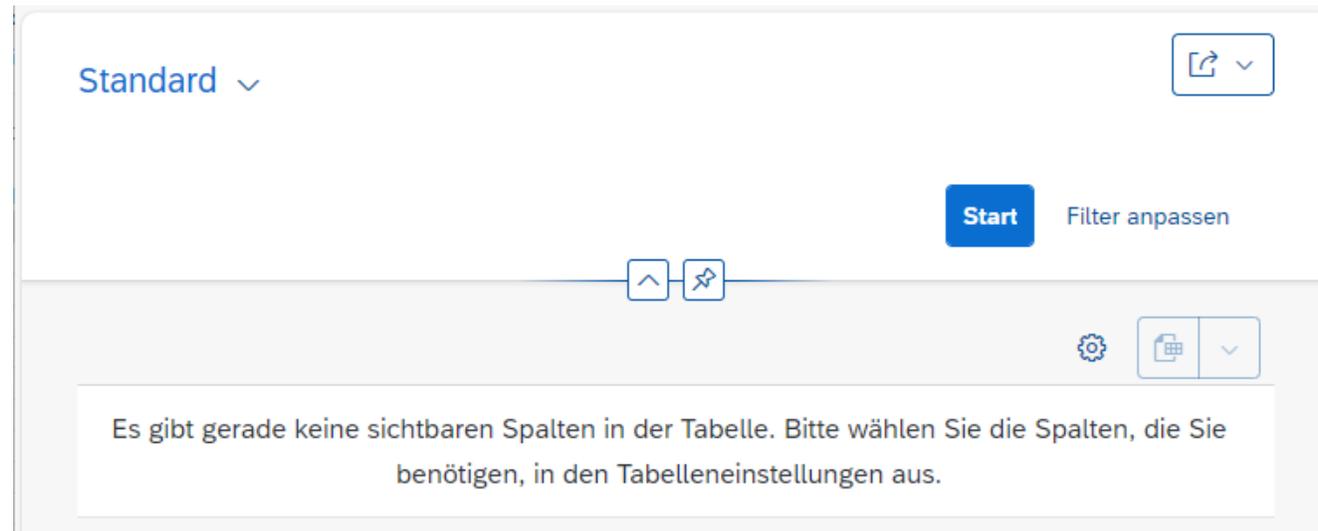
Services
Define services associated with the Service Binding
Local Service Endpoint:

Service Name	Version	Service Definition	
▼ ZFI_BKP_COMMENT	1.0.0	ZFI_BKP_COMMENTS	<input type="button" value="Add Service..."/> <input type="button" value="Remove"/>

Service Version Details
View information on selected service version
Service Information
Local service endpoint is not published. [Publish local service endpoint](#) to view service URL, entity sets and associations.

Hands-On (Backup)

- Zwischenstand: Service aufrufbar



The screenshot shows a user interface for a table. At the top left, there is a dropdown menu labeled "Standard" with a downward arrow. To its right is a share icon with a dropdown arrow. Below these, there is a blue "Start" button and the text "Filter anpassen". In the center, there are two small icons: an upward arrow and a star. To the right of these icons are a gear icon, a table icon, and a dropdown arrow. A white message box at the bottom contains the text: "Es gibt gerade keine sichtbaren Spalten in der Tabelle. Bitte wählen Sie die Spalten, die Sie benötigen, in den Tabelleneinstellungen aus."

Hands-On (Backup)

- Schritt: Erstellung Projektions-View

```
[S4H,100] ZFI_C_BKPDOCUMENTCOMMENTS x
1 @AccessControl.authorizationCheck: #NOT_REQUIRED
2 @EndUserText.label: 'Consumption View'
3 @Metadata.allowExtensions: true
4 define root view entity ZFI_C_BKPDocumentComments
5   provider contract transactional_query
6   as projection on ZFI_R_BKPDocumentComments
7   {
8     key CompanyCode,
9     key AccountingDocument,
10    key FiscalYear,
11    key AccountingDocumentItem,
12      CompanyCodeName,
13      DocumentDate,
14      AccountingDocumentHeaderText,
15      PostingKey,
16      DocumentItemText,
17      CostCenter,
18      DocumentComment
19  }
20
```

```
[S4H,100] ZFI_BKP_COMMENTS x
1 @EndUserText.label: 'Comments Service'
2 define service ZFI_BKP_COMMENTS {
3   expose ZFI_C_BKPDocumentComments as DocumentComments;
4 }
```

Hands-On (Backup)

- Schritt: Metadata

```
[S4H,100] ZFI_C_BKPDOCUMENTCOMMENTS ×
1 @Metadata.layer: #CUSTOMER
2 annotate entity ZFI_C_BKPDocumentComments
3 with
4 {
5
6 @UI      : {
7   selectionField: [{ position: 10 }],
8   listItem     : [
9     { position: 10 },
10    { type: #FOR_ACTION, dataAction: 'setComment',label: 'Set comment' } ]
11 }
12 CompanyCode;
13
14 @UI      : {
15   selectionField: [{ position: 20 }],
16   listItem     : [{ position: 30 }]
17 }
18 AccountingDocument;
19
20 @UI      : {
21   selectionField: [{ position: 30 }],
22   listItem     : [{ position: 40 }]
23 }
24 FiscalYear;
25
26 @UI      : {
27   listItem     : [{ position: 50 }]
28 }
29 AccountingDocumentItem;
30
31 @UI      : {
32   listItem     : [{ position: 20 }]
33 }
34 CompanyCodeName;
```

Hands-On (Backup)

- Zwischenstand: UI vorhanden

Standard ▾ 🔗 ▾

Buchungskreis: 🔗 Buchungsbeleg: 🔗 Geschäftsjahr: 🔗 **Start** Filter anpassen

⬆️ 🔗 ⬆️ 🔗 Set comment ☰ ▾ ⚙️ 📅 ▾

Buchungsk...	Gesellschaftsname	Buchungsbeleg	Geschäfts...	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	>

Hands-On (Backup)

- Schritt: Entität für Popup

```
D [S4H,100] ZFI_S_BKPCOMMENTPOPUP X
1 @EndUserText.label: 'Popup for Comment'
2 define abstract entity ZFI_S_BKPCommentPopUp
3 {
4   @EndUserText.label: 'Comment'
5   DocumentComment : abap.string;
6 }
7
```

Hands-On (Backup)

- Schritt: Verhalten (Root)

```
[B] [S4H,100] ZFI_R_BKPDOCUMENTCOMMENTS X
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 }
```

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(it_data).  
  
  LOOP AT it_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 ) ).  
  
  ENDMETHOD.  
  
  READ ENTITIES OF ZFI_R_BKPDocumentComments IN LOCAL MODE  
  ENTITY Comment ALL FIELDS WITH CORRESPONDING #( keys )  
  RESULT DATA(it_update).  
  
  result = VALUE #( FOR ls_update IN it_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( ) ) ).  
  
  ENDMETHOD.  
ENDMETHOD.
```

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

Hands-On (Backup)

- Schritt: Verhalten (Projektion)

```
[S4H,100] ZFI_C_BKPDOCUMENTCOMMENTS X  
1 projection;  
2 strict ( 2 );  
3  
4 define behavior for ZFI_C_BKPDocumentComments alias Comments  
5 {  
6   use action setComment;  
7 }
```

Hands-On (Backup)

- Schritt: Access Control (Root)

```
[S4H,100] ZFI_R_BKPDOCUMENTCOMMENTS x
1 EndUserText.label: 'ACL for Root'
2 @MappingRole: true
3 define role ZFI_R_BKPDocumentComments {
4   grant
5     select
6     on
7       ZFI_R_BKPDocumentComments
8     where
9       ( CompanyCode ) = aspect pfcg_auth ( F_BKPF_BUK, BUKRS , ACTVT = '03' );
10
11 }
```

Hands-On (Backup)

- Schritt: Access Control (Consumption)

```
[S4H,100] ZFI_C_BKPDOCUMENTCOMMENTS x
1 @EndUserText.label: 'ACL for Consumption'
2 @MappingRole: true
3 define role ZFI_C_BKPDocumentComments {
4   grant
5     select
6     on
7       ZFI_C_BKPDocumentComments
8     where
9       inheriting conditions from entity ZFI_R_BKPDocumentComments;
10
11 }
```

Hands-On

Das Ergebnis

- Implementierung der Fiori Anwendung
- Umsetzung der Funktionalität

→ Clean Core / Cloud Ready

The screenshot displays the SAP Fiori 'Standard' application interface. At the top, there is a 'Standard' dropdown menu and a share icon. Below this, there are input fields for 'Buchungskreis:', 'Buchungsbeleg:', and 'Geschäftsjahr:', each with a copy icon. A 'Start' button and 'Filter anpassen' text are also visible. A 'Set comment' button is located on the right side of the interface. The main content area features a table with columns: 'Buchungskreis...', 'Gesellschaftsname', 'Buchungsbeleg', 'Geschäftsj...', 'Buchungssi...', and 'Buchungsbelegdatum'. The table contains several rows, with the first two rows checked. A 'Set comment' dialog box is open in the foreground, showing a 'Comment:' label and an empty text input field. The dialog has 'Set comment' and 'Abbrechen' buttons at the bottom.

Buchungskreis...	Gesellschaftsname	Buchungsbeleg	Geschäftsj...	Buchungssi...	Buchungsbelegdatum	
<input checked="" type="checkbox"/>	1010	Company Code 1010			05.01.2016 >	
<input checked="" type="checkbox"/>	1010	Company Code 1010			05.01.2016 >	
<input type="checkbox"/>	1010	Company Code 1010			15.11.2017 >	
<input type="checkbox"/>	1010	Company Code 1010			15.11.2017 >	
<input type="checkbox"/>	1010	Company Code 1010	100000000	2018	1	21.11.2018 >



Foto von Joshua Hoehne auf Unsplash

Zusammenfassung

Zusammenfassung



Entwickler

- Schulung der Entwickler
- Verständnis von RAP
- Entwicklungswerkzeuge



Strategie

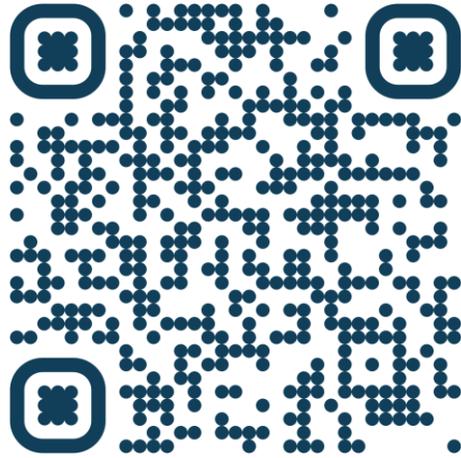
- Zerlegen von komplexen Anwendungen
- Nutzung des 3-TIER Modells



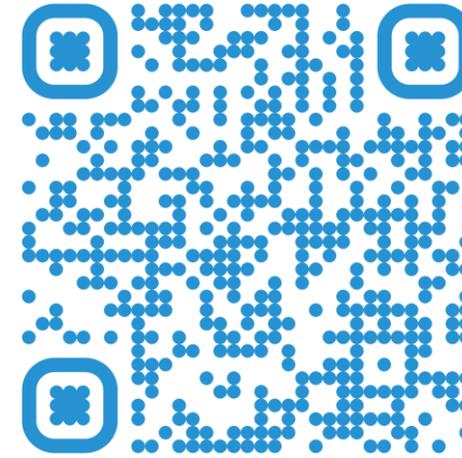
Migration

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

Danke



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