



ABAP Skills für SAP S/4HANA

SAP Community Call



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Themenschwerpunkte

- Konzeption & Management von Entwicklungsprojekten
- Qualitymanagement & Performanceoptimierung
- Clean Code
- S/4HANA Custom Development

- SAP Champion 🏆



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Themenschwerpunkte

- Konzeption & Management von Entwicklungsprojekten
- Qualitymanagement & Performanceoptimierung
- SAP Fiori
- SAP Cloud Platform
- System Integration & Connectivity

ABAP & S/4HANA

- **ABAP Objects**
- **Expressions**
 - **ABAP**
 - **String**
 - **Table**
 - **SQL**

- **Instanzen – Datenkapselung**
- **Interfaces**
- **Exception – Exception Klassen**
- **Abstrakte Klassen**
- **Vererbung**
- **Events**

- **ABAP Objects by Thomas Jung**
 - <https://www.youtube.com/playlist?list=PLoc6uc3ML1JT55KwLJVe1QXnsP9emoJG2>
- **ABAP Objects by Damir Majer**
 - <https://www.youtube.com/watch?v=UAe1EUZZpw&feature=youtu.be>
- **Object Oriented Programming in Java**
 - <https://open.sap.com/courses/java1>
- **Expressions Online Help**
 - https://help.sap.com/doc/abapdocu_754_index_htm/7.54/de-DE/abenexpressions.htm
- **Modern ABAP Webinar**
 - <http://www.cadaxo.com/high-class-development/modernabap>
- **SAP TechED 2019 – Optimize Your Custom ABAP Code for SAP HANA**
 - <https://events.sap.com/teched/en/session/51535>
- **SAP Bücher**
 - <https://www.rheinwerk-verlag.de/sap>
 - <https://de.espresso-tutorials.com>

- **SQL Expressions**
- **CTEs**
- **CDS Views (Core Data Services)**
- **AMDP**

- **Next Generation zu Definieren von Views und Datenmodellen**
- **100% in ABAP integriert**
 - Transportmanagement
- **Nur ADT**
- **Zugriff via ABAP SQL**
- **Highlights**
 - Hierarchien, Parameter, **Annotations**, Extension,...

- **ABAP SQL - Operanden und Ausdrücke Online Help**
 - https://help.sap.com/doc/abapdocu_754_index_htm/7.54/de-DE/index.htm?file=abenopen_sql_operands.htm
- **ABAP CDS Views in 6 Schritten** Bigl
 - <http://www.cadaxo.com/high-class-development/abap-cds-views-6-schritte-zum-verstaendnis>
- **Community WIKI**
 - <https://wiki.scn.sap.com/wiki/display/ABAP/CDS+-+Core+Data+Services>
- **ABAP CDS Views Webinar**
 - <http://www.cadaxo.com/high-class-development/webinar-abap-cds-views>
- **ABAP CDS Online Help**
 - <https://help.sap.com/viewer/f2e545608079437ab165c105649b89db/7.51.1/en-US/4ed1f2e06e391014adc9fffe4e204223.html>
- **SAPPress: Core Data Services für ABAP** Colle, Dentzer, Hrasznik
 - <https://www.rheinwerk-verlag.de/core-data-services-fuer-abap/>
- **openSAP: ABAP Development for SAP HANA** Weiler, Gruschke
 - <https://open.sap.com/courses/a4h1>

- **ADT – ABAP Development Tools** for Eclipse
- **BAS – Business Application Studio**
 - WebIDE
- **Visual Studio Code**

- **Views - konfigurierbar**
 - Mehrere Sourcecodes nebeneinander
 - Fehler, DDIC/Type Infos, ABAP Help
- **Quickfixes**
 - Automatisierte Änderungen, Tipparbeit
- **Refactoring**
 - Teilebereiche in Methoden extrahieren

- **SE80 vs. ADT - via ADT Online Help**
- **Refactoring in ABAP**
 - <https://www.youtube.com/watch?v=zx8K28HFjF8>
- **ABAP Development Tools Webinar**
 - https://www.youtube.com/watch?v=8a9EQs_UNvg
- **ABAP Entwicklung in Eclipse**
 - <https://www.rheinwerk-verlag.de/abap-entwicklung-in-eclipse>

- **Statische Codechecks**
 - Code Inspector
 - ATC
- **Analysetools in ABAP**
 - SQL Monitor
 - SQL Performance Tuning Worklist
 - ABAP Call Monitor

- **ABAP Call Monitor (SCMON) – Analyze usage of your code** Dolinskaja
 - <https://blogs.sap.com/2017/04/06/abap-call-monitor-scmon-analyze-usage-of-your-code>
- **DSAG Leitfaden: Einsatz des ABAP Test Cockpit (ATC)** Juni 2020
 - https://www.dsag.de/sites/default/files/2020-10/dsag_leitfaden_atc_2020_06.pdf

- **Programmiermodelle**
 - BOPF
 - RAP
- **OData**
- **Fiori Elements**
- **Gateway**

Klassische ABAP Entwicklung

- Freestyle ABAP
Entwicklung

ABAP Plattform ≤ 7.50

ABAP Programmiermodell für SAP FIORI

- Gateway Builder
- OData
- BOPF
- Core Data Services

ABAP Plattform ≥ 7.51

ABAP RESTful Programmiermodell (RAP)

- Business Service
- Core Data Services
- Verhaltensdefinition

SAP Cloud Platform ABAP
SAP S/4HANA

- **Getting Started with the ABAP RESTful Application Programming Model**
 - <https://blogs.sap.com/2019/10/25/getting-started-with-the-abap-restful-programming-model>
- **ABAP RESTful Application Programming Model Online Help**
 - <https://help.sap.com/viewer/fc4c71aa50014fd1b43721701471913d/201909.003/en-US/289477a81eec4d4e84c0302fb6835035.htm>
- **openSAP: Building Apps with ABAP RESTful Appl. Progr. Model**
 - <https://open.sap.com/courses/cp13>
- **ABAP RESTful Application Programming Model (RAP) – FAQ**
 - <https://blogs.sap.com/2020/10/16/abap-restful-application-programming-model-faq>
- **SAP Business Object Processing Framework Webinar**
 - <https://www.youtube.com/watch?v=gi3lVxhTmRA>
- **SAPTechED 2019: ABAP RESTful Programming Model Big Picture**
 - <https://events.sap.com/teched/en/session/51543>
- **SAPPress: ABAP-Entwicklung für SAP S/4HANA** Freilinger-Huber, Stark, Chiuaru, Trapp
 - https://www.rheinwerk-verlag.de/abap-entwicklung-fur-sap-s4hana_5183
- **SAPPress: SAP Gateway und Odata** Bönnen, Drees, Fischer, Heinz, Strothmann
 - <https://www.rheinwerk-verlag.de/sap-gateway-und-odata>

- **ABAP Erweiterungskonzept**
 - **Enhancement Framework**
 - Explizite Erweiterungsoptionen
 - Implizite Erweiterungsoptionen
 - BAdIs
 - Pre, Post & Overwrite Methoden
 - ...

- **How to extend SAP standard using ADT**
 - <https://blogs.sap.com/2020/08/05/how-to-extend-sap-standard-using-adt>
- **Online Help – Enhancement Framework**
 - https://help.sap.com/doc/saphelp_nw75/7.5.5/de-DE/94/9cdc40132a8531e10000000a1550b0/content.htm
- **SAPPress: Kundeneigene Erweiterungen mit ABAP**
 - <https://www.rheinwerk-verlag.de/kundeneigene-erweiterungen-mit-abap-das-umfassende-handbuch>

- **In-App Key User Extensibility**
 - UI, Felder, Objekte
- **Side-by-Side Extensibility**
 - SAP Cloud Platform – SCP
 - Steampunk
 - HTTP Calls
 - XML, JSON

- **ABAP PaaS**
- **neueste Version**
 - Updatezyklus
- **RAP < S/4HANA**

- **S/4HANA Extensibility: Use Case Overview**
 - <https://blogs.sap.com/2016/09/12/s4hana-extensibility-use-case-overview>
 - <https://blogs.sap.com/2019/07/25/sap-s4hana-extensibility-a-learning-journey>
- **Steampunk**
 - <https://community.sap.com/topics/cloud-platform-abap-environment>
- **ABAP Platform @ SAP TechEd 2020**
 - <https://blogs.sap.com/2020/11/18/abap-platform-sessions-at-sap-teched-2020>

- **dotabap.org**
 - **abapGit**
 - **abap2xlsx**
 - **ABAP-SDK-for-Azure**
 - ...

- **Git Client für ABAP**
- **Tool Installation**
 - Online/ZIP
- **Codeaustausch Steampunk**
- **Hotfixswitch**
- **gCTS**

- **dotabap.org**
 - <https://dotabap.org>
- **abapGit - GitHub**
 - <https://github.com/abapGit/abapGit/blob/master/README.md>
- **abapGit Dokumentation**
 - <https://docs.abapgit.org>
- **Online Help gCTS**
 - <https://help.sap.com/viewer/4a368c163b08418890a406d413933ba7/LATEST/de-DE/f319b168e87e42149e25e13c08d002b9.html>
- **DSAG: AK Development Treffen 02.7.2020** (open Source, git, abapgit, gcts, ...)
 - <https://dsagnet.de/dsag-event?id=127557&app=info>

- **Clean ABAP**
- **Refactoring**
- **Unit Test**

- **DRY** – Don't Repeat Yourself
- **KISS** – Keep It Simple, Stupid
- **YAGNI** – You Aint Gonna Need It

- Erklärung durch Code

```
* employee is allowed?  
IF EMPLOYEE->AGE > 65 AND  
  EMPLOYEE->FLAGS = ABAP_TRUE AND  
  EMPLOYEE->ISLOCKED <> ABAP_TRUE.  
...  
ENDIF.
```



```
IF EMPLOYEE->ISALLOWED( ) = ABAP_TRUE.  
...  
ENDIF.
```

- **Clean Coder Uncle Bob**
 - <http://cleancoder.com>
- **Clean ABAP**
 - <https://github.com/SAP/styleguides/blob/master/clean-abap/CleanABAP.md>
- **Clean ABAP SAPPress Buch**
 - <https://www.rheinwerk-verlag.de/clean-abap-a-style-guide-for-developers>
- **Refactoring**
 - <https://www.refactoring.com>
- **Clean Coder**
 - <https://clean-code-developer.de>
- **Artikel auf entwickler.de**
 - <https://entwickler.de/online/agile/clean-code-134128.html>

- **ABAP Weekly Newsletter** Damir Majer
 - <https://abapweekly.info>
- **SAP Developer News**
 - https://www.youtube.com/playlist?list=PL6RpkC85SLQAVBSQXN9522_1jNvPavBgg
- **TechEd2020**
 - <https://events.saptech.com/widget/sap/saptech2020/Catalog>
- **SAP Community**
 - <https://community.sap.com/topics>
- **Developers**
 - <https://developers.sap.com>
- **Tutorials**
 - <https://developers.sap.com/tutorial-navigator.html>
- **DSAG**
 - <https://www.dsag.de>

Q&A