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Technical Articles

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Part#1. SAP CDS views Demystification

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With this blog post series, I am trying to put together CDS views concepts and technology in detail with screenshots so that you can better understand even though you do not have access to S/4HANA system. I will break this knowledge into multiple blog posts with this first blog post as an introduction and index to all others. So let's get started.

Introduction:

CDS stands for Core Data Services. This is the new programming paradigm within new SAP environment specifically S/4HANA systems. CDS views can be created without HANA DB as well but I will focus on an S/4 system with a HANA DB as that is the future road map of SAP .

If you are not new to SAP, by now you might have already explored what HANA brings on the table. In a nutshell, HANA is an in-memory database which enables high speed data processing. With this awesome feature, SAP has tried to put all the logic calculations back into the database instead of the application server as it was done prior to HANA. So CDS views are the new programming design concepts which can achieve **Code-to-Data paradigm** which actually means Code push down into the database for processing. CDS is an enhancement to standard SQL technology which runs within ABAP layer which means that the design time objects are created in the ABAP layer and can be transported by regular Transport mechanism with a TR

number assigned to each object. The Design Time object is created in database i.e. the HANA DB which enables Code-to-Data shift.

As I mentioned, CDS is an enhancement to standard SQL language, it has all SQL features as below;

1. DDL – Data Definition Language. Used to CREATE Table, MODIFY Table etc.
2. DQL – Data Query Language. Used to READ data.
3. DCL – Data Control Language. Used to configure 'SECURITY'
4. Expression Language – Mathematical calculations, conditions Case..Endcase etc.

Let's dive deep into CORE DATA SERVICES..

Part# 2. Create a Basic CDS View: Learn about the default annotations while creating a basic CDS view.

Part# 3. CDS view with Expressions and Session Variable: Find how to configure mathematical expressions and session variables to fetch system parameters.

Part# 4. Consume CDS View in an ABAP Program: Check the new ABAP syntax to consume CDS view.

Part# 5. CDS View Extension: Learn the concept of re-usability within CDS views.

Part# 6. Parameters in a CDS view : Learn how to filter data in a CDS view

Part# 7. How to search for SAP standard CDS Views : Find ways to search for SAP delivered CDS content.

Part# 8. CDS Views – Joins and Associations : Learn to combine data with multiple tables or CDS views.

Part# 9. CDS View – OData Service : Publishing to the outer world : Learn how to create an OData service.

Part# 10. CDS Views – @VDM Annotation: Check the SAP Best Practices for CDS view development

Part# 11. End to End Data Modeling and Reporting with CDS views: Hands on with a complete business scenario for a simple analytical requirement.

To summarize, with above blog posts you are able to understand the CDS views way better than just high level information scattered around all over internet. Its mandatory to learn CDS views to work on S/4HANA systems as a technical expert. Hope you have enjoyed it.

Stay tuned for more on CDS security and other topics.

Keep learning..

SK

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Dharmesh Kumar
October 30, 2019 at 12:00 am

Excellent post !! Looking forward for the rest of the blogs…

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Jocelyn Dart
November 6, 2019 at 9:20 am

Hi Sanjeev

Great to see another voice breaking it down for ABAP developers.

A couple of things that would take your blogs to the next level:

1. Please note CDS Views are not only for embedded analytics - SAP S/4HANA uses CDS Views pretty much everywhere … or at least everywhere Simplification has happened and under all those nearly 1700 SAP Fiori apps
2. Suggest add the **SAP S/4HANA** tag
3. You can try all these techniques out for yourself using a [SAP S/4HANA Trial system](#)

4. There are some really useful guides on the latest techniques in SAP S/4HANA 1909 documentation such as Virtual Data Models and CDS Views and the ABAP CDS Development User guide

5. Oh and it's always **SAP S/4HANA** … if you use the correct branding it's a lot easier to find the matching documentation.

Cheers

Jocelyn

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Sanjeev Kumar | Blog Post Author
November 6, 2019 at 10:05 am

Thanks a lot Jocelyn for this information!

Regards

Sanjeev.

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Vivek Gaur
December 23, 2019 at 4:30 pm

Excellent Post Sanjeev . Keep up the great work.

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Shanthi Bhaskar
April 28, 2020 at 5:05 pm

superb post Sanjeev.

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Harish Yarrakula
October 18, 2020 at 5:10 pm

Great Work...really helpful for beginners like me!

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Subbaiah Kotha
November 24, 2020 at 1:40 pm

Thanks Sanjeev for the blog series. You have covered a lot in this series and and I always comeback here for reference. Excellent work.

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