

FANS Platform Netværksmøde

8/6-2022 – Hybrid – Havneholmen & Teams

Kl. 10 - 16



Frans Holm
SAS FANS Denmark Manager



Dagsorden

- **Velkomst**
 - v. Frans Holm, SAS
- **Nyheder fra Partnere - KMD**
 - v. Per Jensen, KMD
- **Pause**
- **Overvejelser ved implementering af en ny løsning**
 - v. Mads Krogh Nielsen, BEC (& Frans Holm, SAS)
- **Fra SAS 9 til SAS Viya - med et lille mellemtrin**
 - v. Christian Handberg, DLR Kredit
- **Frokost**
- **Nyheder fra Technology**
 - v. Thomas Jacobsen, SAS
- **Pause**

FANS
Platform
Netværksmøde

Dagsorden

FANS Platform Netværksmøde

- **SAS i Cloud**
 - v. Johnny Christensen, SAS
- **Cloud**
 - v. Mathias Valeur-Meller, Microsoft
- **SAS Analytics Pro (on Viya)**
 - v. Frans Holm, SAS
- **Afslutning**
 - v. Frans Holm, SAS

- **Netværksmiddag**

Styregruppe

FANS
Platform
Netværksmøde

Styregruppe:

- Lars Hult (Topdanmark)
- Christian Handberg (DLR Kredit)
- Christian Christensen (SAS)
- Thomas Jacobsen (SAS)
- Frans Holm (SAS)

Diverse Nyheder

<https://blogs.sas.com/content/iml/2022/01/10/2021-second-look.html>

12 blog posts
from 2021 that
deserve a second
look

SAS programming

For years, I've been writing articles about how to accomplish tasks in Base SAS. In addition, I now write about

- **The DOLIST syntax:** The DOLIST syntax enables you to specify a sequence of numeric values. A sequence is specified by using the `start TO step BY increment` syntax. The DOLIST syntax is valid in many SAS procedures and in the DATA step.
- **Use FCMP to define a function:** I regularly remind programmers that they can use FCMP to implement custom functions that can be called from the DATA step. In this article, I describe how to implement a PRODUCT function that handles missing values.
- **What is a caslib?:** SAS Viya is the future of SAS. In Viya, you can access data in a caslib, which is similar to (but different from) a libref in traditional SAS. Learn how to define caslibs to access data in CAS.
- **How to find SAS documentation on a topic:** Because there is a lot of overlap between SAS Base and SAS Viya, it can be difficult to find the most recent documentation for the SAS version that you are using. This article describes some search engine tricks that you can use to find the most recent documentation.

Optimization

Optimization is at the heart of many statistical techniques, such as maximum likelihood estimation. But some SAS procedures support many methods for solving optimization problems:

- **The knapsack problem:** The classic knapsack problem is an example of an optimization in which the goal is to maximize the value of items in a knapsack. This article shows how to solve the knapsack problem as a mixed integer linear programming problem using PROC OPTMODEL.
- **Genetic algorithms:** A genetic algorithm is a heuristic optimization technique. You can read about how to use genetic algorithms in PROC OPTMODEL.

Multivariate simulation and bootstrapping

It is straightforward to simulate univariate data. It is harder to simulate multivariate data while preserving important dependencies. Similarly, it can be challenging to analyze the bootstrap distribution of a multivariate statistic, such as a correlation coefficient.

- **The Iman-Conover method for simulation:** I wrote about the Iman-Conover method for simulating multivariate correlated data in *Simulating Data with SAS* (Wicklin, 2013). It remains a favorite nonparametric method for simulating multivariate data because it works well and because you can understand the Iman-Conover method as a series of geometric transformations.
- **Copulas:** Copulas provide the most powerful parametric method for simulating correlated multivariate data. If you are serious about simulating multivariate data, you need to learn how to simulate from copulas in SAS. Like the Iman-Conover method, copulas have a beautiful geometric interpretation in terms of transformations.
- **Bootstrap correlation coefficients:** It can be challenging to analyze the bootstrap distribution of a multivariate statistic. This article provides a step-by-step example of a bootstrap analysis of the Pearson correlation coefficients for multivariate data.

Probability and statistics

Probability and statistics provide the theoretical basis for modern data analysis. You cannot understand data science, machine learning, or artificial intelligence without understanding the basic principles of statistics. Most readers are familiar with common probability distributions, Pearson correlation, and least-squares regression. The following articles discuss some of the lesser-known statistical cousins of these topics:

- **The inverse gamma distribution:** To use any probability distribution, you need to know four essential functions: the density, the cumulative probability, the quantiles, and how to generate random variates. You might be familiar with the gamma distribution, but what is the inverse gamma distribution and how do you define the four essential functions in SAS? Similarly, what is the generalized gamma distribution?
- **The Hoeffding D statistic:** The Hoeffding D statistic measures the association between two variables. How do you compute the Hoeffding D statistic in SAS, and how do you interpret the results?
- **Weibull regression:** In ordinary least squares regression, the response variable is assumed to be modeled by a set of explanatory variables and normally distributed errors. If the error terms are Weibull distributed as part of a regression analysis, but you need to transform the regression estimates to obtain confidence intervals.

Free SAS® Certification Practice Exams

Diverse Nyheder

https://www.sas.com/en_us/certification/resources/sas-practice-exams.html

Free Practice Exams

Programming	
Advanced Analytics	
Data Management	
Visual Analytics	
Administration	

- › SAS Programming Associate
- › SAS 9.4 Base Programming Performance-Based
- › SAS 9.4 Advanced Programming Performance-Based
- › SAS Viya Fundamentals of Programming
- › SAS Viya Intermediate Programming

The 5 characteristics of a future-fit, data-driven organisation

Diverse Nyheder

<https://blogs.sas.com/content/hiddeninsights/2022/04/26/the-5-characteristics-of-a-future-fit-data-driven-organisation>

- 1. Every business decision is fueled by predictive and prescriptive analytics
- 2. Insight-as-a-service enables real-time decision making and business process automation
- 3. DevOps principles are used to industrialize the end-to-end analytics life cycle
- 4. High degree of data literacy achieved through democratization of data analytics
- 5. Proactive AI governance ensures tangible and responsible business outcomes

Applikations udvikling

Diverse Nyheder

Forventer at holde 2 netværksmøder i efteråret om applikations udvikling:

- Introduktion til muligheder:
 - Stored Process/Process Server/API'er mm
- Eksempler på mere avancerede applikationer

Diverse Nyheder

<https://explore.sas.com/event/8c314b18-f97b-4156-ae95-2358df0ba862/summary>

SAS EXPLORE

SAS EXPLORE

A Virtual Event for Technologists
September 27-29

Faglig netværkstur for FANS norden

<https://www.sas.com/sas/events/nordic/fans-nordic-sas-user-group/curiosity-trip.html>

4. – 6. oktober
2022



FANS Netværks arrangement

FANS Netværks arrangement

Reserver datoerne allerede nu

- 29. og 30 November
– efter Netværksmøderne



Operaen – Store scene kl. 19.30 – 22.30

For Premium
medlemmer

FANS Medlemskaber – fra 2022

Package	Network Meetings	Virtual FANS Events	Social events	SAS GF / SAS AX/ Curiosity Trip to Cary	SAS Local Forums	SAS Days	Free E Learning courses	SAS Certification, Learning Conference, AVT Training	Price (DKK) Standard	Price (DKK) 2022**
FANS Free	Yes	Yes	No	No	No	No	No	No	0	0
FANS Premium Personal	Yes	Yes	Yes (1)	Yes (1)	Yes (1)	No	Yes (1)	Yes (10%)	3.000	750
FANS Premium Company	Yes	Yes	Yes (5)	Yes (4)	Yes (10)	Yes (2)	Yes (3)	Yes (10%)	19.500	5.000

FANS Netværks møder

Danmark/Norden – Hybrid

- 8/6 Platform 10.00-16.00
- 8/6 Netværks middag 16.30-19.30
- 9/6 Visual Analytics 9.30-12.30
- 9/6 Programmering 13.30-16.30
- 9/6 Netværks middag 17.00-20.00

FANS Netværks møder

Danmark/Norden – Hybrid

- 30/8 Visual Analytics (Odense) 10.00-14.30
- 6/9 Programmering (Vejle) 10.00-14.00
- 7/9 Platform (Kbh+Aar) 10.00-16.00
- 13/9 Data Science (Nordic) 13.00-16.00
- 21/9 Platform Overview (Aarhus) 9.00-12.00
- 18/10 Customer Intelligence (Nordic) 10-11/13-15
- 9/11 Platform Overview 13.00-16.00
- 29/11 Data Science (Nordic) 9.30-12.30
- 29/11 Programmering 13.30-16.30
- 29/11 Musical I 16.30-22.30
- 30/11 Platform 9.30-12.30
- 30/11 Visual Analytics 13.30-16.30
- 30/11 Musical II 16.30-22.30
- 1/12 Visual Analytics (Nordic) 13.00-16.00

FANS Netværks møder

Danmark/Norden – Hybrid

- 30/8 Visual Analytics (Odense) 10.00-14.30
- 6/9 Programmering (Vejle) 10.00-14.00
- **7/9 Platform (Kbh+Aar) 10.00-16.00**
- 13/9 Data Science (Nordic) 13.00-16.00
- 21/9 Platform Overview (Aarhus) 9.00-12.00
- 18/10 Customer Intelligence (Nordic) 10-11/13-15
- 9/11 Platform Overview 13.00-16.00
- 29/11 Data Science (Nordic) 9.30-12.30
- 29/11 Programmering 13.30-16.30
- 29/11 Musical I 16.30-22.30
- **30/11 Platform 9.30-12.30**
- 30/11 Visual Analytics 13.30-16.30
- 30/11 Musical II 16.30-22.30
- 1/12 Visual Analytics (Nordic) 13.00-16.00

Tak fordi du er taler

- Opfind ikke noget nyt!
- Du behøver ikke have svaret!



Copyrig



<https://forms.office.com/r/YnuC1RYQX3>

Har du:

Input?

Forslag?

Ideer?

FANS Lodtrækning

Vind en SAS ting!

FANS Lodtrækning

Dagens gave!



FANS lodtrækning

Send mail til:

frans.holm@sas.com

Skriv:

Subject: Lodtrækning

Mailen: Navn + Adresse

(+ størrelse på t-shirt)

Udtrækning

Hvordan:



Nyheder fra Partnere - KMD

v. Per Jensen, KMD

Pause

Vi starter igen kl. 11.20

Overvejelser ved implementering af en ny løsning

v. Mads Krogh Nielsen, BEC
& Frans Holm, SAS

Fra SAS 9 til SAS Viya - med et lille mellemtrin

v. Christian Handberg, DLR Kredit

SAS FANS

Platform netværksmøde

- Visual Analytics i DLR -

Om DLR Kredit

- 1960** DLR bliver etableret under navnet Dansk Landbrugs Realkreditfond. DLR får eneret til finansiering af dansk landbrug
- 1999** Eneretten bliver ophævet
- 2000** DLR bliver omfattet af realkreditloven og reguleres efter samme vilkår som andre realkreditinstitutter
- 2001** DLR bliver omdannet til aktieselskab med lokale og regionale pengeinstitutter som aktionærer. DLR udvider forretningen til også at tilbyde finansiering af erhvervsejendomme.
- 2002** DLR udvider med finansiering af ejendomme på Grønland.
- 2009** Ejerboliger på Færøerne
- 2020** Ejendomme til sociale, kulturelle og undervisningsmæssige formål
- 2021** DLR udsteder sine første grønne realkreditlån



DLR Kredit

Tal for 2021

175,2
mio.kr.

Udlånsportefølje
pr. 31. december 2021

1.138
mio.kr.

Resultat før skat
pr 31. december 2021

746
mio.kr.

Provisioner til
pengeinstitutterne 2021

15,1
mia.kr.

Egenkapital
pr 31. december 2021

DLR Kredits organisation

Antal medarbejdere

220

medarbejdere
i Nyropsgade

26

medarbejdere i
Model- og Datainnovation

55

vurderingssagkyndige
fordelt i hele landet

-1

ledige stillinger

SAS Visual Analytics i DLR

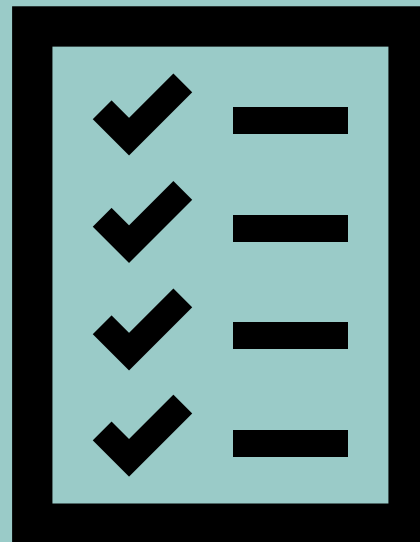
-Oprindelig løsning

Teknisk setup

- On-premise
- VM-Ware
- Windows-server
- 16 CPU – 130 GB RAM
- SAS 9.4 Visual Analytics 7.5

Visual Analytics i tal

- 1 miljø
- 8 LASR-servere m. autoloader
- 10 (-ish) udviklere
- 30 brugere seneste måned
- 50 Rapporter – 30 brugt seneste måned



Anvendelse af VA

Ledelsesrapportering

- Sagsopfølgning
- Ekspeditionstider

Forretningsunderstøttelse

- Engagementer
- Restancer

Forretningsanalyse

- Udvikling i forretningsområder

HR-rapportering

- Ferie/fravær
- Medarbejderomsætning



- Hvor vil vi hen?

Datadrevet understøttelse af forretning

- Hurtig time-to-market på nye visualiseringer
- Stabil drift
- Høj performance
- PowerBI vs Visual Analytics

Forudsætninger

- On premise
 - Compliance
 - Eksisterende VMware
- Løsningen skal bruges nu
- Eksisterende SAS kompetencer
- Ingen ved hvornår SAS Viya understøtter Tanzu



SAS Visual Analytics i DLR

-Kommende løsning

Teknisk setup

- On Premise
- VM-Ware m Tanzu / Kubernetes
- Linux RedHat servere
- SAS Viya 4
- Visual Analytics 8.x
- 3 Miljøer



SAS Visual Analytics i DLR

-Step Stone

Teknisk setup

- VM-Ware
- Linux RedHat servere
 - 1 Platform server
 - 1 CAS worker Server
 - 1 NFS server
- SAS Viya 3.5
- Visual Analytics 8.5



Processen indtil nu

- Man kan hvad man skal

Udfordringer

- Introduktion af Linux i DLR
- Introduktion af SAS VIYA i DLR
- Deadline "i går"
- Stejl læringskurve
 - Vi asfalterer mens vi kører
- Migrering
- UTF8- vs wlatin1-encoding
- Anvendelse af SAS Visual Analytics SDK
- Kerberos SSO



Processen indtil nu

- Man kan hvad man skal

Det gode samarbejde med SAS

- Workshops med SAS i planlægningsfasen
- Skarpe konsulenter til installation og konfiguration
- Hands-on-læring i fbm. migrering og oprettelse af sikkerhed, etc.
- Udarbejdelse af samarbejdsplan med SAS



Spørgsmål



Frokost

Vi starter igen kl. 13.30

Dagsorden

FANS Platform Netværksmøde

- **Nyheder fra Technology**
 - v. Thomas Jacobsen, SAS
- **Kaffepause**
- **SAS i Cloud**
 - v. Johnny Christensen, SAS
- **Cloud**
 - v. Mathias Valeur-Meller, Microsoft
- **SAS Analytics Pro (on Viya)**
 - v. Frans Holm, SAS
- **Afslutning**
 - v. Frans Holm, SAS
- **Netværksmiddag**

Nyheder fra Technology

v. Thomas Jacobsen, SAS

Pause

Vi starter igen kl. 14.40

SAS i Cloud

v. Johnny Christensen, SAS



SAS i Cloud

Mine erfaringer og input

FANS Platformsmøde d. 8-6-2022

Johnny Christensen, SAS Industry Advisor





Indhold

1. **Introduktion**
2. **SAS i Cloud**
3. **Cloud proces fra evaluering til drift**
4. **Spørgsmål**

SAS i Cloud

En kort introduktion til SAS Cloud baseret på MS Azure og forskellige servicelag

SAS i Cloud

Platform deployment overblik og SAS Cloud service

SAS 9 platform
SAS Viya platform

On-prem deployment
(Openshift for SAS Viya)

Remote Managed Service

Egen Cloud tenant
deployment

Remote Managed Service

SAS MS Azure
tenant deployment

Hosted Managed Services
Option: Application Management

SAS Hosted Managed Service

Why?

Én modpart

Dedikeret single point of contact (SPOC)

Hurtigere behandling af incidents og ændringsønsker

Outsourcing

Outsourcing af infrastruktur og drift

Optimeret storage og compute services baseret på SAS bedst praksis

Værdirealisering

Hurtig etablering af miljøer tilpasset behov

Vedligeholdelse af miljøerne, herunder hotfixes

Tilgængelighed

Garanteret SLAs for tilgængelighed

Cloud processen

Overblik over evaluerings-, implementerings- og drifts processen



Cloud processen

Overblik over vigtige emner i evalueringsfasen (egen erfaringer)

SAS Evaluering

- Scoping og evaluering af løsning
- Funktionelle krav
- Teknisk arkitektur og sizing af opstarts miljø
- Transformationsprocessen (Processer, Kompetencer, Projekt)
- Skal SAS have ansvaret for infrastruktur og drift?
- Udarbejdelse af indstilling

SAS Cloud-evaluering

- Non-funktionelle krav f.eks. Antal miljøer, SLA, DR, backup, kryptering
- Integration til
 - Data f.eks. Secure connection
 - Brugsikkerhed f.eks. SSO vha. SCIM
 - GIT for versionsstyring og promotionstyring
 - Open source
- Sikkerhed og Legal dialog
 - Dokumentation for sikkerhed f.eks. SOC rapporter og SAS audit rapporter
 - Data indenfor Europa
 - Support indenfor Europa er på vej pga. Schrems II
- SAS Application Management (SAM)

En række danske kunder har allerede valgt og implementeret SAS Cloud løsninger

Hosting i SAS® Cloud

Overblik over ydelser indeholdt i SAS Cloud på Microsoft Azure

SAS Cloud-implementering

- SAS Project Manager allokeres til implementeringsfasen
- Installation, opsætning og konfiguration af SAS-software
- Lagringskapacitet per miljø, jf. aftale
- SAS Administration (indledende opsætning)
- Etablering af integration til brugersikkerhed og data, samt evt. integration til GIT og opsætning af open source ressourcer
- Test

SAS Cloud-drift (standard)

- 99% opetidsgaranti på hele platformen
- 30 min. SLA for service af 'blocker'-hændelser
- Løbende 24/7 teknisk monitoring og support
- SAS Teknisk Account Manager (TAM) – Single point of contact i den efterfølgende driftsperiode
- Administration af IT-infrastruktur i Microsoft Azure
- SAS Administration (gældende for kontraktperioden)
- Hotfixes og vedligeholdelsesopdateringer
- Online dokumentation og kommunikationsværktøjer (hændelsesadministration og samarbejdsværktøjer)
- Evt. SAS Applikation Management (SAM)

SAS i Cloud

Platform deployment overview og SAS Cloud service

SAS 9 platform
SAS Viya platform

On-prem deployment
(Openshift for SAS Viya)

Remote Managed Service

Own Cloud tenant
deployment

Remote Managed Service

SAS MS Azure
tenant deployment

Hosted Managed Services
Option: Application Management



Spørgsmål?

sas.com



Cloud

v. Mathias Valeur-Meller, Microsoft

SAS Analytics Pro (on Viya)

v. Frans Holm, SAS

Analytics Pro (Viya)

Container installation – Dockers
on a Windows PC

SAS Analytics Pro

Two versions of SAS Analytics Pro

- **SAS Analytics Pro**, includes:
 - SAS Studio 5 (Basic)
 - Base SAS
 - SAS/GRAPH, SAS/STAT, and
 - SAS/ACCESS products
- **SAS Analytics Pro Advanced Programming**
 - The base products, plus
 - SAS/IML, SAS/OR, SAS/QC, and SAS/ETS
 - Is scheduled to ship in April 2022 (Stable 2021.2.6)

Analytics Pro (Viya)

Vejledninger

[Analytics Pro vejledning](#)

[Docker Desktop](#)

[Portainer](#)

PC/Server



Dockers



SAS
(Image/Container)

Cook book

- Instal Dockers desktop
 - The Linux kernel update package must be installed, and WSL 2 must be set as the default. For more information, see [Steps 4 and 5 of this Linux Installation Guide for Windows 10](#)
- Create folder
 - C:\Apro_Viya
- Go to your software order
 - Select the software version
 - Download the certificates and license to the deploy directory:
 - Click Download Certificates to download the *-certs.zip file.
 - Click Download License Only to download the *.jwt file.
- Download SAS Container Manager – from tools menu
 - And unzip the file

SAS Viya Orders

SAS Viya 3.5 and earlier orders are not available through My SAS.



Filter:

Tech Support Site

70180938

Downloads for Order 0B1FTZ

The most recently downloaded order assets for this order are for version: Stable 2021.2.6

They were downloaded on May 11, 2022 by: Me

[Download](#)   

Select a Cadence Version

2021.2.6

Changing the cadence for this order modifies the [technical support policy](#) for Viya deployments created with it.

How to Deploy

- [Deployment Information](#)
- [Order Release Notes](#)

Order Assets

- License
- Certificates

[Download Assets](#) [Close](#)

Filter:

Date Update

2022

- SAS Viya Orders API
- SAS Mirror Manager
- SAS Container Manager for Linux
- SAS Container Manager for macOS
- SAS Container Manager for Windows

SAS Container Manager

Command-line interface

```
[cloud-user@pdcesx02103 project]$ ./container-manager --help
Manage SAS products.

Usage:
  container-manager [flags]
  container-manager [command]

Available Commands:
  help          Help about any command
  install       Install a SAS product
  list          List SAS products
  start         Start a SAS product
  stop          Stop a SAS product
  uninstall     Uninstall a SAS product
  version       Print the version

Flags:
  --dry-run    only print commands, do not execute them
  -h, --help   help for container-manager
  -k, --insecure allow insecure server connections when using SSL
  --verbose    enable verbose output

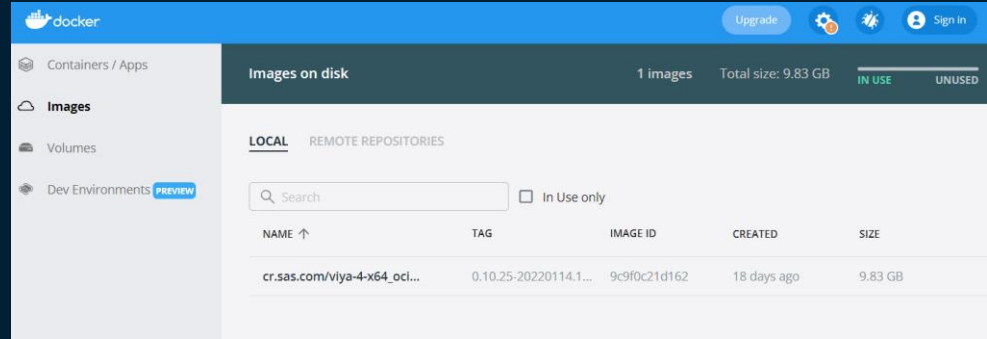
Use "container-manager [command] --help" for more information about a command.
[cloud-user@pdcesx02103 project]$ █
```

Cook book

- Pull the “sas-analytics-pro” image
 - 1. Install_Image.bat
 - `container-manager install --deployment-data SASViyaV4_0B1FTZ_certs.zip sas-analytics-pro`
 - App 9 GB – takes some time....

Cook book

- View the image
 - Dockers desktop
 - 2. ViewImage.bat
 - 2b. ViewImage - dockers.bat



2. ViewImage.bat

2b. ViewImage - docker.bat

- container-manager list installed

- docker images

Cook book

- Create folders:
 - sasinside
 - sasdemo
- Create startscript
 - 3. Start_Container.bat
 - 3b. Start_Container - dockers.bat
- Find userinfo in sasdemo/authinfo.txt
 - default user sasdemo password JK2WGSWgm3

3. Start_Container.bat

3b. Start_Container - dockers.bat

- `container-manager start sas-analytics-pro`
- `--license-path SASViyaV4_0B1FTZ_stable_2021.2.6_license_2022-05-11T085604.jwt`
- `--data-dir sasdemo`

- `docker run -u root --name=sas-analytics -e RUN_MODE=developer`
- `-e SASLICENSEFILE=Licence.jwt --rm --cap-add sys_admin -d -p 8080:80 -p 8443:443`
- `-v C:\AnaPro\sasinside:/sasinside -v C:\AnaPro\sasdemo:/data 9c9f0c21d162`

Cook book

- Start browser: localhost:8080
- Username + PW
 - Filen: C:\APro_Viya\sasdemo\authinfo.txt
 - default user sasdemo password JK2WGSWgm3
- Libname til data
 - My_sas_program.sas

SAS Studio

New Options View Open Save All

Explorer

- My Favorites
- Folder Shortcuts
- sasinside
- sas-analytics-pro
 - Home
 - authinfo.txt

Start Page x +

GET STARTED

- New SAS Program
- New Import
- New Query

NEW Explore new features in SAS Studio

LEARN

- Learn SAS Studio - videos, tutorials, and training
- Learn SAS programming

STAY CONNECTED

- Join the community
- Request a feature

Welcome to

SAS STUDIO


Develop SAS programs in a rich programming environment.

Tasks
Analyze data and create reports via point-and-click interfaces.

Data Access
Import and access data seamlessly.

Data Preparation
Join, filter, sort, and transform data via a robust Query Builder.

Collaboration
Organize and share work.



sas

About

Product name:	SAS® Studio (Basic)
Release:	5.2
Build date:	2/9/2022, 6:59:28 PM
Site name:	SAS ANALYTICS PRO - DOCKERS
Site number:	7.0180938E7

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[Legal Notices](#)

[Supported Browsers and Platforms](#)

Submission (0)

PC/Server



Dockers



SAS



Cook book

- Libname til andre områder.
 - Default er SAS i Lockdown mode
- 8. StartImage extended.bat
 - SASLICENSEFILE=Licence.jwt (licens filen placeres i /inside)
 - SASLOCKDOWN=0
 - -v C:\APro_Viya\andre_data:/data2
- Libname
 - My_sas_program.sas

8. StartImage extended.bat

- `docker run -u root --name=sas-analytics -e RUN_MODE=developer`
- `-e SASLICENSEFILE=Licence.jwt`
- `-e SASLOCKDOWN=0`
- `--rm`
- `--cap-add sys_admin -d -p 8080:80 -p 8443:443`
- `-v C:\APro_Viya\sasinside:/sasinside`
- `-v C:\APro_Viya\sasdemo:/data`
- `-v C:\APro_Viya\andre_data:/data2`
- `99f1fb06910c`

The screenshot shows the Docker Desktop interface. The top bar includes the Docker logo, an 'Upgrade' button, and a 'Sign in' button. The sidebar on the left contains navigation options: Home, Containers, Images, Volumes, Dev Environments (with a 'PREVIEW' badge), Extensions (with a 'BETA' badge), and Add Extensions. The main content area is titled 'sas-analytics 99f1fb06910c RUNNING' and is in the 'Inspect' view. It displays the following information:

Mounts

/SASINSIDE	C:\APro_Viya\sasinside	
/DATA	C:\APro_Viya\sasdemo	
/DATA2	C:\APro_Viya\andre_data	

Ports

443/tcp	0.0.0.0:8443	
7080/tcp	Not bound	
80/tcp	0.0.0.0:8080	

Cook book

https://go.documentation.sas.com/doc/en/anprocdc/v_010/dplyviya0ctr/p100iskw8g9zeh1hoy72fws1p3g.htm

Configuration Tasks and Examples

Enable Use of the PYTHON Procedure

Enable Use of SASPy

Configure SSH Access to the Container — Windows Example

Enable Use of the X Command

Set New Locations for the Work Library and Utility Files

Examples for Adding Users

Container Image Storage

Security and System Options

Reference Topics

Data Access

Getting Started with Data Access

Set Environment Variables to Configure SAS/ACCESS Products

Configuration for ODBC-based Connections

Requirements and Configuration by SAS/ACCESS Product



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Questions

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Afslutning

Frans Holm



<https://forms.office.com/r/YnuC1RYQX3>

Har du:

Input?

Forslag?

Ideer?

FANS Lodtrækning

Dagens gave!





Tak for i dag

Vi Ses FANS!

Feedback modtages gerne
f.eks. i evaluering

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