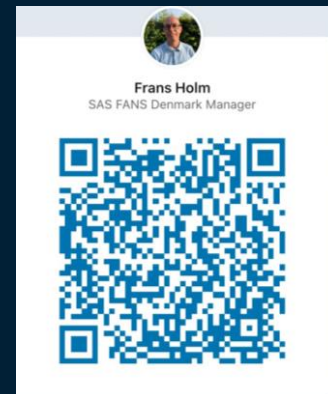


FANS Programmering Netværksmøde

1/12-2021 – Virtuelt på Teams

Kl. 13.30 – 16.30



FANS
Programmering
Netværksmøde

Dagsorden

- **Velkomst**
 - v. Frans Holm, SAS
- **Performance - Stuktur i kode**
 - v. Ole Steen, SAS
- **Pause**
- **Performance – Er anvendelse af CAS en mulighed?**
 - v. Frans Holm, SAS
- ~~Eksport af et datasæt til en semikolon-separeret fil i EG~~
 - v. Jesper Michelsen, Nykredit
- **Pause**
- **Dato-formater og funktioner**
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 - v. Frans Holm, SAS

Tak fordi du er taler

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



Copyrig

Styregruppe

FANS

Programmering

Netværksmøde

Styregruppe:

- Jesper Michaelsen, Nykredit
- Peter Clemmensen, Nykredit
- Ole Steen (SAS)
- Barbara Olsen (SAS)
- Sara Armandi (SAS)
- Frans Holm (SAS)

Top 5 Handy PROC SQL Tips

Diverse Nyheder

https://www.sas.com/en_us/webinars/handy-proc-sql-tips.html

You will learn how to:

- ✔ Join tables dynamically.
- ✔ Create in-line views for joins.
- ✔ Pivot like a dancer with the Boolean.
- ✔ Recognize patterns in your data.
- ✔ Create running totals.

Diverse Nyheder

<https://blogs.sas.com/content/sgf/2021/09/10/sas-analytics-pro-cloud-native-deployment/>

SAS Analytics Pro

- Base SAS® Software
- SAS/GRAPH®
- SAS/STAT®
- SAS® Studio

Blogs

All Topics ▾ All Industries ▾ Blog Direc

SAS Analytics Pro – now available for on-site or containerized cloud-native deployment – providing your entry point into SAS Viya

Diverse Nyheder

<https://blogs.sas.com/content/sgf/2021/09/30/5-ways-to-make-your-sas-code-run-faster/>

Jedi SAS Tricks: 5 Ways to Make Your SAS Code Run Faster



How to send email using SAS

Diverse Nyheder

<https://communities.sas.com/t5/SAS-Communities-Library/How-to-send-email-using-SAS/ta-p/746523>

In this article:

- [Sending email with SAS: a simple example](#)
- [How to configure SMTP to send email in SAS](#)
- [How to use email attributes in SAS](#)
- [How to format your email using ODS](#)
- [How to send email with attachments in SAS](#)
- [How to send email with embedded images in SAS](#)
- [How to send email to multiple recipients in SAS](#)
- [How to send a text message using SAS](#)
- [How to use Gmail or cloud-based service to send email with SAS](#)

Choose Your SAS Journey

<https://www.sas.com/sas/offers/choose-your-sas-journey.html?referid=CS1487>

- Become a SAS Data Ninja
- Fast Track Your Viya Adoption
- Become a Viya Admin Superhero
- The Art of Data Visualization
- Next-Gen AML & Transaction Monitoring
- SAS Starter Kit
- Unmasking Fraudsters in Banking
- Data Scientist Fast Track
- The Agile SAS Environment with DevOps
- Risk Lab Evolution

FANS 2022 medlemskaber

Kontakt Frans.Holm@sas.com – Jeg vil kontakt alle medlemmer

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	No	0	0
FANS Premium Personal	Yes	Yes	Yes (1)	Yes (1)	No	Yes (1)	No	Yes (1)	Yes (10%)	3.000	750
FANS Premium Company	Yes	Yes	Yes (5)	Yes (4)	Yes (4)	Yes (10)	Yes (2)	Yes (3)	Yes (10%)	19.500	5.000

Diverse Nyheder

FANS
T-shirt



Diverse Nyheder

IPO: Initial Public Offering

SAS will become
IPO ready by 2024



JIM GOODNIGHT

CEO, SAS



Menti

Har du:

Input?

Forslag?

Ideer?

FANS Lodtrækning

Vind en SAS ting!

FANS Lodtrækning

Dagens gave!



Kan være du får én af følgende farver i stedet.

FANS lodtrækning

Send mail til:

frans.holm@sas.com

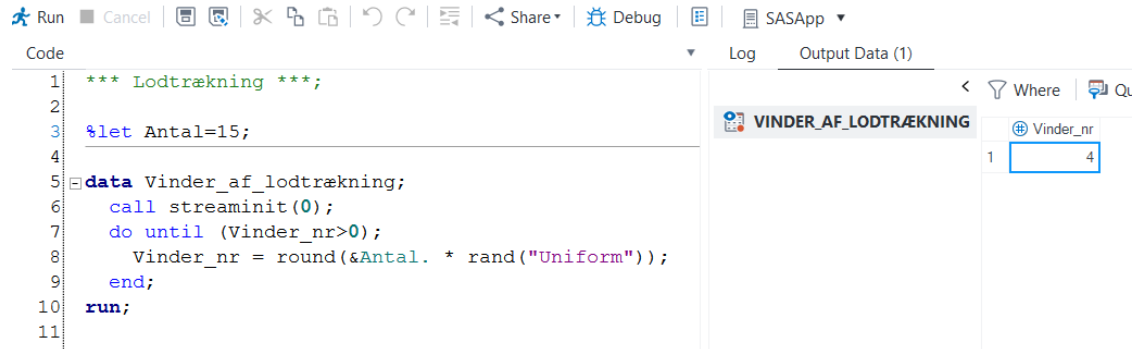
Skriv:

Subject: Lodtrækning

Mailen: Navn + Adresse

(+ størrelse på t-shirt)

Udtrækning
Hvordan:



The screenshot shows the SAS Studio interface. The top menu bar includes 'Run', 'Cancel', 'Share', 'Debug', and 'SASApp'. The main area is divided into a 'Code' editor on the left and an 'Output Data (1)' window on the right. The code editor contains the following SAS code:

```
1  *** Lodtrækning ***;
2
3  %let Antal=15;
4
5  data Vinder_af_lodtrækning;
6      call streaminit(0);
7      do until (Vinder_nr>0);
8          Vinder_nr = round(&Antal. * rand("Uniform"));
9      end;
10 run;
11
```

The 'Output Data (1)' window displays a table with the following data:

VINDER_AF_LODTRÆKNING	
	Vinder_nr
1	4

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Performance - Struktur i kode

v. Ole Steen, SAS

Du kan stadig at deltage i FANS lodtrækningen

Pause – Pause – Pause - Pause

Vi starter igen kl. 14.35

Performance

– Er anvendelse af CAS en mulighed?

v. Frans Holm, SAS

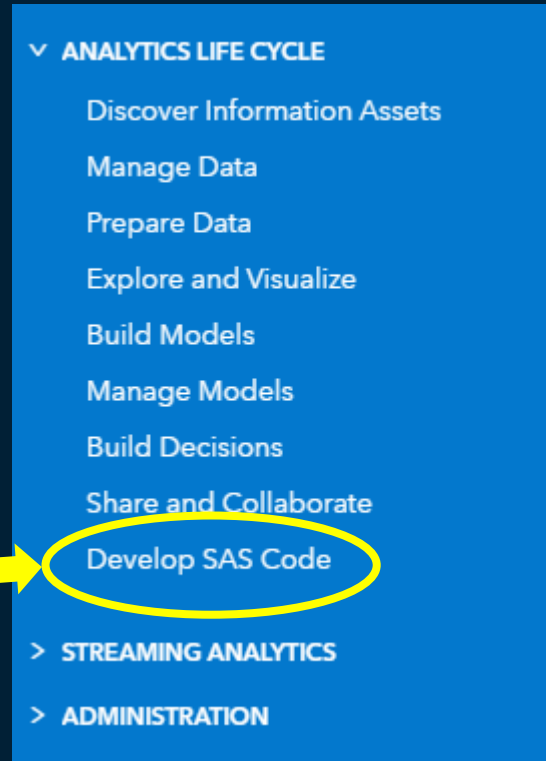
- o Er CAS = Viya?
- o Skal man altid anvende CAS?
- o Hvorfor skal jeg anvende Viya?

Hvad er SAS?

- Et interface -> En regnemaskine!
- Flere interfaces -> flere regnemaskiner

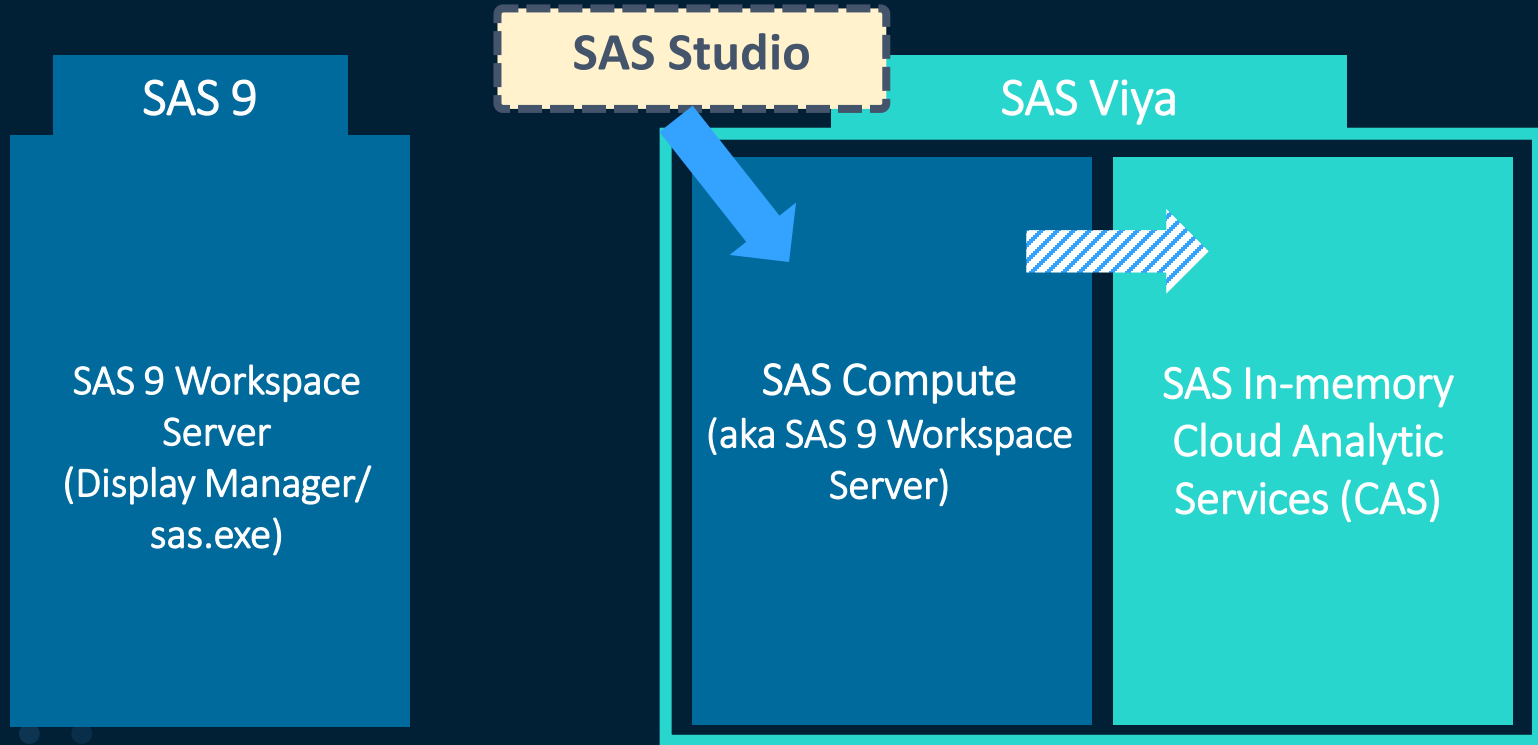
Hvad er Viya?

- "Et interface" -> flere regnemaskiner



- Runtimes

SAS9 vs. SAS Viya



Lidt mere teori...

Fordelen ved CAS:

- Data er In-memory
- Anvende flere treaths fordelt over flere servere
- Hastighed (måske)

Lidt teori:

- CAS lib
- CAS ActionSet.Action

Libname

Data Source



Connection Information

- session details
- path for files
- connection for database

Access Controls

- user IDs
- permissions
- and more

Caslib

In-Memory Space



Data Source



Connection Information

- session details
- path for files
- connection for database

Access Controls

- user IDs
- permissions
- and more

Programmering i Viya

- Intet nyt – du kan det samme
 - Datastep & Proc's
- Og alligevel ...
- Regler:
 - Data skal være i CAS for at kunne bruge CAS
 - Ikke alt gøres på samme måde i CAS
 - Proc CAS -> Actionset.Action

Action Sets by Name

Action Set	Description
smartData	Provides actions for data analysis using machine learning
spatialreg	Contains action for modeling spatial data
spc	Provides actions for control chart analysis
stabilityMonitoring	Provides actions for monitoring stability
svDataDescription	Provides actions for anomaly detection
svm	Provides actions for support vector machines
table	Provides actions for accessing and managing data
textMining	Provides actions for mining textual data
textParse	Provides actions for parsing and categorizing text
textRuleDevelop	SAS Text Analytics linguistic rule development package for categorization, concept extraction and sentiment analysis
textRuleDiscover	Provides actions for term map extraction
textRuleScore	SAS Text Analytics linguistic rule scoring package for categorization, concept extraction and sentiment analysis

Tables Action Set: Syntax

Provides actions for accessing and managing data

[Syntax](#) ▾ [Examples](#) ▾ [Details](#)

Table of Actions

Action Name	Description
addCaslib	Adds a new caslib to enable access to a data source
alterTable	Rename tables, change labels and formats, drop columns
attribute	Manages extended table attributes
caslibInfo	Shows caslib information
columnInfo	Shows column information
deleteSource	Delete a table or file from a caslib's data source
dropCaslib	Drops a caslib
dropTable	Drops a table
fetch	Fetches rows from a table or view
fileInfo	Lists the files in a caslib's data source
index	Create indexes on one or more table variables
loadDataSource	Loads one or more data source interfaces
loadTable	Loads a table from a caslib's data source

Kode eksempler

```
proc cas;
  table.loadTable /
    path="iris.sashdat"
    casout={name="iris"};
run;

table.tableInfo / table="iris";
table.tableDetails / table="iris";
quit;
```

```
Data public.Nytable;
  set public.GITabel;
  #min sas kode;
Run;
```

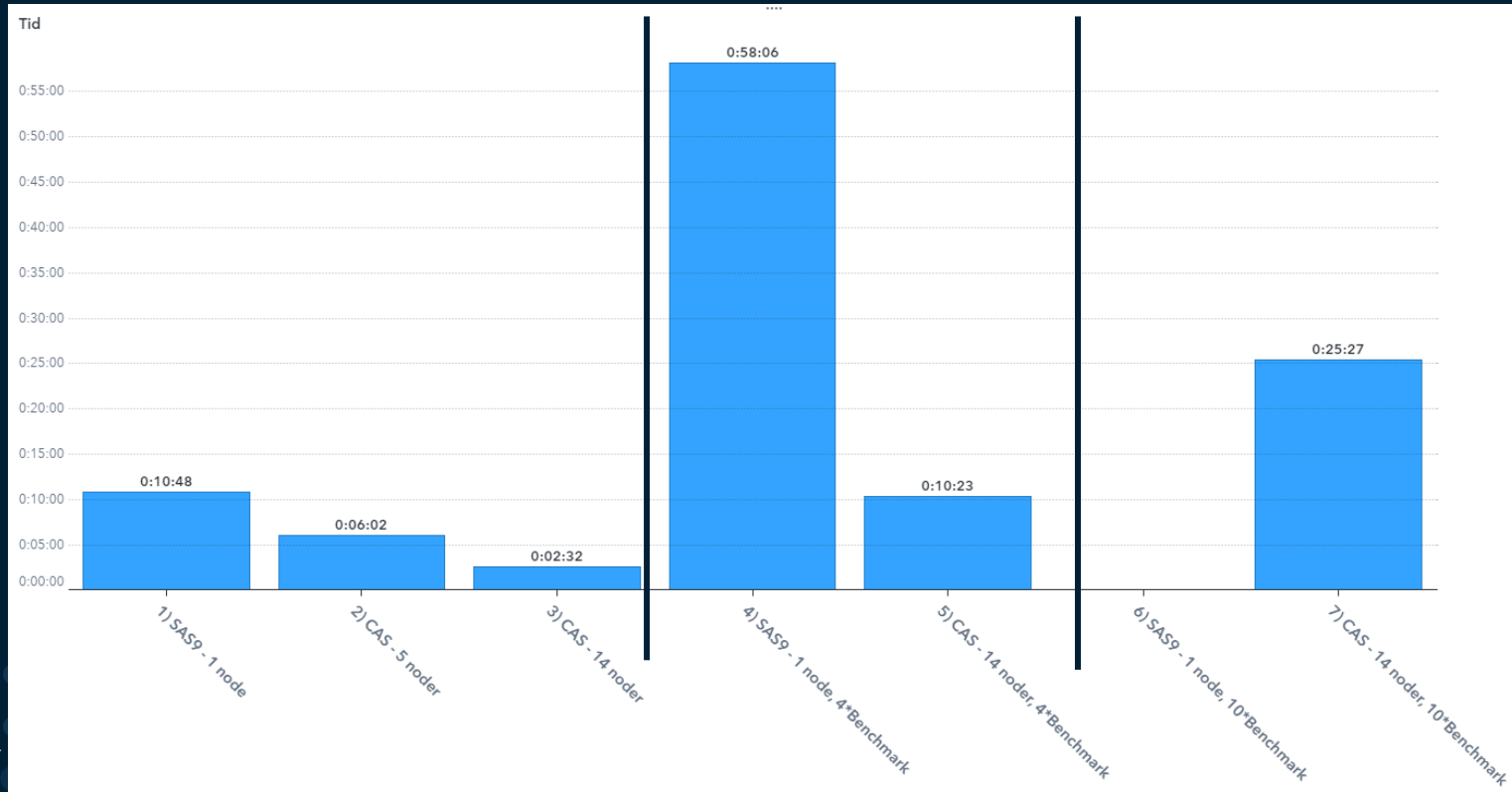
```
proc means data=public.cake
  n mean max min range std fw=8;
var PresentScore TasteScore;
title 'Summary of Presentation and
Taste Scores';
run;
```

Demo

Test af performance - dansk case

SAS9 vs. CAS

- Nuværende Benchmark datasæt: 50 GB (1.500 kolonner, 5 mill. rækker)



Performance

– Er anvendelse af CAS en mulighed?

- Er CAS = Viya?
- Skal man altid anvende CAS?
- Hvorfor skal jeg anvende Viya?

What runs where on SAS Viya

Compute or CAS runtime

- Many BASE SAS procedures reengineered to run in Compute and CAS.
 - Same procedure, better runtime in CAS.
- SAS STAT procedures (all 102 of them) can only run in Compute - SAS 9 way.
 - None are reengineered to run in CAS. Maybe SAS Statisticians remain perfectly happy despite this.
 - SAS Statisticians might lose out if they don't revert to CAS alternatives (for speed, new analytics features).
- SAS Visual Statistics / Visual Data Mining & Machine Learning procedures run only in CAS.
 - Created as a procedure to make classic SAS programmers happy.
 - Not 1:1 equivalents to SAS STAT procedures.
 - 27 VS procedures + 24 VDMML procedures.
- CASL (CAS actions) programming run in CAS.
 - SAS 9 statisticians are reverting to this alternative due to the wealth of functionality, granularity and need for speed.

https://go.documentation.sas.com/doc/en/pgmsascdc/9.4_3.5/casml/titlepage.htm

https://go.documentation.sas.com/doc/en/vdmmlcdc/8.1/casactml/casactml_neuralnet_table.htm

Links

- <https://blogs.sas.com/content/sgf/2021/06/21/important-caveats-to-consider-when-you-run-a-data-step-on-cas-tables/>
- <http://sww.sas.com/blogs/wp/gate/43881/data-driven-parallel-cas-action-execution/stfoer/2021/05/28>
- <http://sww.sas.com/blogs/wp/gate/43481/casl-parallel-cas-action-execution/stfoer/2021/04/19>
- <https://www.sas.com/content/dam/SAS/support/en/sas-global-forum-proceedings/2020/4147-2020.pdf>

Eksport af et datasæt til en semikolon-separeret fil i EG

v. Jesper Michelsen, Nykredit

Dato formater og funktioner

v. Sara Armandi, SAS

Du kan stadig at deltage i FANS lodtrækningen

Pause – Pause – Pause - Pause

Vi starter igen kl. 15.50

Proc HTTP

v. Ole Steen, SAS

Afslutning & lodtrækning



Menti

Har du:

Input?

Forslag?

Ideer?

A woman with long reddish-brown hair, wearing a blue denim shirt, is smiling and shaking hands with another person whose arm is visible from the right. The background is a blurred office environment with warm lighting.

Samarbejde med SAS Academic

= Studerende der anvender SAS

Samarbejde om projekter = Ekstra hænder

Potentielle nye medarbejdere med SAS kundskaber

Kontakt:

Sara.Armandi@sas.com

FANS Network Meetings & Platform Overview

Danmark – Virtuelt på Teams

- 2/12 FANS | Platform 9-12
- 3/12 SAS | Platform Overview 9-12
- 14/12 FANS | Customer Intelligence (Nordic) 13-14
- 26/1 AML for AML users (Nordic) 9.00-12.10 CET

FANS Lodtrækning

Dagens gave!



Kan være du får én af følgende farver i stedet.



Tak for i dag

Vi Ses FANS!

Feedback modtages gerne
f.eks. i evaluering

Frans.Holm@sas.com

