



HORIZONT

XINFO – Programming Language z/OS - C

About this Presentation

This PowerPoint gives you a short overview about how to work with XINFO - C scanner.

At some slides this button can be used to jump to specific slides in this presentation.

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Click on this symbol to jump to the overview slide

AGENDA

XINFO – Programming Language z/OS - C

Displays

General Info

Includes

System

Functions

Function Call

Files

DB2 Access

Variables

Types

The XINFO C scanner delivers following information:

- Which programs are using which includes ?
- Which programs are using which functions ?
- Which programs are using a certain type ?
- Which programs are calling external programs ?
- Which programs are using which variables ?
- Which programs are deleting rows from a DB2 table ?
-

C - Displays

The screenshot shows the XINFO PC Client interface. The main menu includes File, Home, Table, Netplan, Barchart, Chart, Script, and View. The 'Table' menu is active, showing options like Copy, Select All, Toggle Selection, Customize, Use Default, Use Custom, Group, Statistics, All, Show SQL, Inverse Filter, and Chart. The 'Workspace Tree' on the left lists various categories: Programs, Source, Assembler, C, COBOL, Easytrieve, and Java. The 'C' category is highlighted with a red rounded rectangle, and a callout box points to it with the text 'The displays for C'. The 'C' category contains the following sub-items: General Info, Includes, System Calls, Functions, File Access, Functions Calls, DB2 Access, CICS Access, DLI Access, MQSeries Calls, Variables, and Types. The status bar at the bottom indicates 'Connected as: P392E, file: XX37T#25'.

The displays for C

C – General Info

Selection panel "General Info"

C - General Info

System	=	▼	
Member/Source	=	▼	
Lib/Dir	=	▼	
Load Module	=	▼	
Last Update User	=	▼	
Last Update Date	=	▼	DD.MM.YYYY
Last Update Time	=	▼	HH:MM:SS
Has main Func Y/N	=	▼	
EXEC SQL Y/N	=	▼	
EXEC CICS Y/N	=	▼	
EXEC DLI Y/N	=	▼	
Dynamic SQL Y/N	=	▼	
CICS Data Y/N	=	▼	
DLI Data Y/N	=	▼	
Func Call Data Y/N	=	▼	
File Data Y/N	=	▼	
Function Data Y/N	=	▼	
Includes Y/N	=	▼	
DB2 Data Y/N	=	▼	
SysCall Data Y/N	=	▼	
Variables Data Y/N	=	▼	
Type Data Y/N	=	▼	

OK Actions ▼ Cancel

C – General Info

The screenshot displays the XINFO PC Client interface. The main window, titled "XINFO PC Client - C - General Info", features a menu bar (File, Home, Table, Netplan, Barchart, Chart, Script, View) and a toolbar with various options like Copy, Select All, Toggle Selection, Customize, Use Default, Use Custom, Group, Statistics, All, Subtable, Graph, Show SC, and Inverse P. Below the toolbar is a table titled "C - General Info" with columns: Member, Main, SysCall, SQLData, Cics, IMS, ExecSQL, and ExecCICS. The table lists members such as HELLO, HELLOVB, CSQ4BCA1, CSQ4BCF1, CSQ4BCG1, CSQ4BCJ1, CSQ4BCK1, CSQ4BCL1, CSQ4BCM1, CSQ4BCM2, CSQ4BCP1, CSQ4BCP2, CSQ4BCP3, CSQ4BCP4, CSQ4BCS1, CSQ4BCS2, CSQ4BCX1, and CSQ4BCX2. The member CSQ4BCA1 is selected and highlighted in blue. To the right of the table is a "Details" pane for the selected member, showing various attributes and their values. A callout box points to this pane with the text "Resulting 'General Info'". At the bottom of the window, there are buttons for OK, Copy, Print..., and Save As... The status bar at the bottom left indicates "Connected as: P392E, file: XX37T#25".

Member	Main	SysCall	SQLData	Cics	IMS	ExecSQL	ExecCICS
<all>	<...>	<all>	<all>	<...>	<...>	<all>	<all>
HELLO	Y	N	N	N	N	N	N
HELLOVB	Y	N	N	N	N	N	N
CSQ4BCA1	N	N	N	N	N	N	N
CSQ4BCF1	N	N	N	N	N	N	N
CSQ4BCG1	N	N	N	N	N	N	N
CSQ4BCJ1	N	N	N	N	N	N	N
CSQ4BCK1	N	N	N	N	N	N	N
CSQ4BCL1	N	N	N	N	N	N	N
CSQ4BCM1	N	N	N	N	N	N	N
CSQ4BCM2	N	N	N	N	N	N	N
CSQ4BCP1	N	N	N	N	N	N	N
CSQ4BCP2	N	N	N	N	N	N	N
CSQ4BCP3	N	N	N	N	N	N	N
CSQ4BCP4	N	N	N	N	N	N	N
CSQ4BCS1	N	N	N	N	N	N	N
CSQ4BCS2	N	N	N	N	N	N	N
CSQ4BCX1	N	N	N	N	N	N	N
CSQ4BCX2	N	N	N	N	N	N	N

Name	Value
Member/Source	CSQ4BCA1
Has main Func Y/N	N
SysCall Data Y/N	N
DB2 Data Y/N	N
CICS Data Y/N	N
DLI Data Y/N	N
EXEC SQL Y/N	N
EXEC CICS Y/N	N
EXEC DLI Y/N	N
Dynamic SQL Y/N	N
Func Call Data Y/N	N
File Data Y/N	N
Function Data Y/N	N
Includes Y/N	Y
Variables Data Y/N	N
Type Data Y/N	N
Last Update User	
Last Update Date	
Last Update Time	
Lib/Dir	CSQ800.SCSQC37S
Load Module	CSQ4BCA1
System	CPROJ1

Resulting "General Info"

C - Includes

The screenshot shows the 'C - Includes' dialog box. The 'Include Statement' field is highlighted with a red box and contains the text 'errno.h*'. A callout bubble points to this field with the text 'Search for Includes, e.g. all programs that include "errno.h"'. The dialog box has a list of search criteria on the left and a list of search results on the right. The 'Workspace Tree' on the left shows a project structure with 'C' and 'Includes' folders.

Member/Source	Include Statement	Nesting Level	Found Y/N	System Y/N	Last Update User	Last Update Date	Last Update Time	Include Member/File	Include Lib/Dir	Lib/Dir	Prepro-Macro	Member with Stmt.	Line	Lib/Dir with Stmt.	Load Module	System
	errno.h*															

C - Includes

The image shows a screenshot of the IBM z/OS Explorer interface. On the left, the 'C - Includes' table is visible, listing various include members. A context menu is open over the 'CSQ4BCX3' member, with 'The Main Member' selected. A callout bubble points to this menu with the text: "These programs are using 'assert.h'".

Member	Include-Statement	NestL	Fnd	Sys	Upd:User	Upd:Date
<all>	<all>	<...>	<...>	<...>	<all>	<all>
CSQ4BCX3	emo h	1	Y	Y		
CSQ4LOG:						
CSQ4SMFI						

Below the table, a list of members is shown: C, CA7, CICS, DB2, GRAPH, IMS, JCL, Programs, and SMF. A callout bubble points to this list with the text: "Direct read access to several sources".

On the right, a 'Browse: CSQ800.SCSQC37S(CSQ4BCX3)' window displays the source code for the selected member. The code is a C program header and function description:

```
1 /******  
2 /*          IBM WebSphere MQ for z/OS          */  
3 /*  
4 /*  Module Name : CSQ4BCX3                      */  
5 /*  
6 /*  Description : Sample program to authenticate the userid and  
7 /*                  password from a client ID flow  
8 /*  
9 /******  
10 /* <copyright  
11 /* notice="lm-source"  
12 /* pids="5655-W97"  
13 /* years="2002,2014"  
14 /* crc="4198552729" >  
15 /* Licensed Materials - Property of IBM  
16 /*  
17 /* 5655-W97  
18 /*  
19 /* (C) Copyright IBM Corp. 2002, 2014 All Rights Reserved.  
20 /* </copyright>  
21 /******  
22 /*  
23 /* Environment : CHINIT    user exit; C  
24 /*  
25 /* Function    : Authenticate RemoteUserIdentifier and  
26 /*              RemotePassword pair from MQCD.  
27 /*              If successful, copy RemoteUserIdentifier into  
28 /*              MCAUserIdentifier, thereby changing the  
29 /*              identity context of the thread.  
30 /*
```

C - System

The screenshot displays the XINFO PC Client interface. On the left, the 'Workspace Tree' shows a hierarchy of folders: Programs, Source, Assembler, C, and Java. Under the 'C' folder, several sub-folders are listed, including 'System Calls', which is currently selected. The main window is titled 'C - Functions' and contains a list of search criteria for finding programs using system calls. The 'Function Name' field is highlighted with a red border and contains the text 'getKundenname|'. A callout bubble points to this field with the text 'Search for all programs that are using system calls'. The dialog box also includes fields for System, Lib/Dir, Member/Source, Load Module, Lib/Dir with Stmt., Member with Stmt., Prepro-Macro, Line, Return Type, Parameters, Static Y/N, DB2 Y/N, CICS Y/N, DLI Y/N, and Dynamic SQL Y/N. At the bottom, there are buttons for 'OK', 'Actions', and 'Cancel'. The status bar at the bottom left indicates 'Connected as: P392E, file: XX37T#25'.

Field	Value
System	= [dropdown]
Lib/Dir	= [dropdown]
Member/Source	= [dropdown]
Load Module	= [dropdown]
Lib/Dir with Stmt.	= [dropdown]
Member with Stmt.	= [dropdown]
Prepro-Macro	= [dropdown]
Line	= [dropdown]
Function Name	= [dropdown] getKundenname
Return Type	= [dropdown]
Parameters	= [dropdown]
Static Y/N	= [dropdown]
DB2 Y/N	= [dropdown]
CICS Y/N	= [dropdown]
DLI Y/N	= [dropdown]
Dynamic SQL Y/N	= [dropdown]

C - System

XINFO PC Client - C - Functions

File Home Table Netplan Barchart Chart Script View Style

Copy Select All Toggle Selection Edit Customize Use Default Use Custom Table Layout Group Statistics All Table Functions Show SQL Inverse Filter Tools New Library Chart

C - Functions

Member	Lib/Dir	Load-Mod	Lib/Dir with Stmt.	Stmt-Mem	Prepro-Macro	Line	Function Name	Return Type	Parameters	Static	DB2	CICS	DLI	DynSQL
<all>	<all>	<all>	<all>	<all>	<all>	<..>	<all>	<all>	<all>	<...>	<..>	<...>	<..>	<...>
MINXI01	DATA.XXR.SOURCE.C.PROJ1.PGM	MINXI01	DATA.XXR.SOURCE.C.PROJ1.PGM	MINXI01		1066	GetKundenname	void	PXINXI01_05	N	-	-	-	-
MINXI01	DATA.XXR.SOURCE.C.COMPLEX.PGM	MINXI01	DATA.XXR.SOURCE.C.COMPLEX.PGM	MINXI01		888	GetKundenname	void	PXINXI01_05	N	-	-	-	-

These programs are using "getKundenname"

Connected as: P392E, file: XX37T#14 Lines: 2

C - Functions

The screenshot shows the XINFO PC Client interface. On the left is the 'Workspace Tree' with a tree view containing folders like 'Programs', 'Source', 'Assembler', 'C', and sub-items like 'General Info', 'Includes', 'System Calls', 'Functions', 'File Access', etc. The 'Functions' folder is selected. In the center, the 'C - Functions Calls' dialog box is open. It has several fields, each with a dropdown menu set to '='. The 'Called Function' field is highlighted with a red rectangle and contains the text 'getKundenname'. A dark blue speech bubble points to this field with the text: 'Function "getKundenname" causes problems. Where is it defined?'. At the bottom of the dialog are 'OK', 'Actions', and 'Cancel' buttons. The status bar at the bottom of the client window shows 'Connected as: P392E, file: XX37T#14'.

Field	Value
Member/Source	=
Member with Stmt.	=
Calling Function	=
Called Function	getKundenname
Parameters	=
Lib/Dir	=
Lib/Dir with Stmt.	=
Prepro-Macro	=
Line	=
Load Module	=
System	=

C - Functions

XINFO PC Client - C - Functions Calls

File Home Table Netplan Barchart Chart Script View Style

Copy Select All Toggle Selection Edit Customize Use Default Use Custom Table Layout Group Statistics All Table Functions Show SQL Inverse Filter Tools New Library Chart

C - Functions Calls

Member	Stmt-Mem	Calling Function	Called Function	Parameters	Lib/Dir	Lib/Dir with Stmt.	Prepro-Macro	Line	Load-Mod	System
<all>	<all>	<all>	<all>	<all>	<all>	<all>	<all>	<..	<all>	<all>
MINXI01	MINXI01	GetKDbVvsnr	GetKundenname	pstrName	DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.PGM		827	MINXI01	CPROJ1
MINXI01	MINXI01	GetKDbVvsnr	GetKundenname	pstrName	DATA.XXR.SOURCE.C.COMPLEX.PGM	DATA.XXR.SOURCE.C.COMPLEX.PGM		692	MINXI01	COMPLEX

Workspace Tree

Connected as: P392E, file: XX37T#14

Lines: 2

The function is defined in member "MINXI01"

C – Function Call

XINFO PC Client

File Home Table Netplan Barchart Chart Script View

Copy Select All Toggle Selection Edit Customize Use Default Use Custom Table Layout Group Show SQL

Workspace Tree

- Programs
- Source
 - Assembler
 - C
 - General Info
 - Includes
 - System Calls
 - Functions
 - File Access
 - Functions Calls
 - DB2 Access
 - CICS Access
 - DLI Access
 - MQSeries Calls
 - Variables
 - Types
 - COBOL
 - Easytrieve
 - Java

Connected as: P392E, file: XX37T#14

C - Functions Calls

Member/Source	=	
Member with Stmt.	=	
Calling Function	=	
Called Function	=	getKundenname
Parameters	=	
Lib/Dir	=	
Lib/Dir with Stmt.	=	
Prepro-Macro	=	
Line	=	
Load Module	=	
System	=	

OK Actions Cancel

And now you want to know which programs are using this function: "Called Function" gives you the answer:

C – Function Call

The screenshot shows the XINFO PC Client interface for C-Functions Calls. The window title is "XINFO PC Client - C - Functions Calls". The interface includes a menu bar (File, Home, Table, Netplan, Barchart, Chart, Script, View) and a ribbon with various tool groups like Edit, Table Layout, Table Functions, Tools, and Chart. The main area displays a table with the following data:

Member	Stmt-Mem	Calling Function	Called Function	Parameters	Lib/Dir	Lib/Dir with Stmt.	Prepro-Macro	Line	Load-Mod	System
<all>	<all>	<all>	<all>	<all>	<all>	<all>	<all>	<..	<all>	<all>
MINXI01	MINXI01	GetKdbyVsnr	GetKundenname	pstrName	DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.PGM		827	MINXI01	CPROJ1
MINXI01	MINXI01	GetKdbyVsnr	GetKundenname	pstrName	DATA.XXR.SOURCE.C.COMPLEX.PGM	DATA.XXR.SOURCE.C.COMPLEX.PGM		692	MINXI01	COMPLEX

Ok, no problem: The function is only used in two members

Connected as: P392E, file: XX37T#14

Lines: 2

C – Files

The screenshot displays the XINFO PC Client interface. On the left, the 'Workspace Tree' shows a hierarchy of folders: Programs, Source, Assembler, C, and others. Under the 'C' folder, 'File Access' is selected. The main window shows the 'C - File Access' dialog box with various fields. The 'File Name (intern.)' field is highlighted with a red box and contains the text 'std*'. A callout bubble points to this field with the text: 'And now you want to know which programs are using this function: "Called Function" gives you the answer:'. The dialog box also includes fields for Member/Source, Member with Stmt., Function, Is File Param. Y/N, Action, Parameters, DD-Name, Lib/Dir, Lib/Dir with Stmt., Prepro-Macro, Line, Load Module, and System. At the bottom of the dialog box are buttons for OK, Actions, and Cancel. The status bar at the bottom of the client shows 'Connected as: P392E, file: XX37T#14'.

C - Files

XINFO PC Client - C - File Access

File Home Table Netplan Barchart Chart Script View

C - File Access

Member	Stmt-Mem	Function	File Name (intern.)	Pam	Action	Parameters	DD-Name	Lib/Dir
<all>	<all>	<all>	<all>	<...>	<all>	<all>	<all>	<all>
MINAP11	MINAP11	SetDAap11	stdout	Y	printf	"ÖnFetch - IN_SQL_ROW_NOT_FOUND"	SYSPRINT	DATA.XXR.SOURCE.C.PROJ1.PGM
MINAP11	MINAP11	SetDAap11	stdout	Y	printf	"ÖnFetch %d %ld %ld x%sx %ld x%sx x%sx %15.2f", pstrError -> r	SYSPRINT	DATA.XXR.SOURCE.C.PROJ1.PGM
MINBB30	MINBB30	f_InsBSBB	stdout	Y	printf	"ÖnMINBB30 %d %ld %15.2f x%sx %d x%sx", pstrBBuchung -> cod_b_k	SYSPRINT	DATA.XXR.SOURCE.C.PROJ1.PGM
MINBB80	MINBB80	SetBKBSatz	stdout	Y	printf	"ÖnMINBB80 InsKBuchung id_user: x%sx", pstrMKB -> pstrKBuchung -	SYSPRINT	DATA.XXR.SOURCE.C.PROJ1.PGM
MINBIND	MINBIND	SetBindTest	stdout	Y	printf	"Ergebnis Test Bind: %ldÖn", sqlca . sqlcode	SYSPRINT	DATA.XXR.SOURCE.C.PROJ1.PGM
MINEG00	MINEG00	ChgEGKezVerarb	stdout	Y	printf	"Ön mineg00 ChgEGKezVerarb"	SYSPRINT	DATA.XXR.SOURCE.C.PROJ1.PGM
MINEG00	MINEG00	ChgEGKezVerarb	stdout	Y	printf	"Ön aktion %d", pstrMEG -> cod_aktion	SYSPRINT	DATA.XXR.SOURCE.C.PROJ1.PGM
MINEG00	MINEG00	ChgEGKezVerarb	stdout	Y	printf	"Ön cod_branche %d", pstrEG -> cod_branche	SYSPRINT	DATA.XXR.SOURCE.C.PROJ1.PGM
MINEG00	MINEG00	ChgEGKezVerarb	stdout	Y	printf	"Ön nr_police %s", pstrEG -> nr_police	SYSPRINT	DATA.XXR.SOURCE.C.PROJ1.PGM
MINEG00	MINEG00	ChgEGKezVerarb	stdout	Y	printf	"Ön cod_extem %d", pstrEG -> cod_extem	SYSPRINT	DATA.XXR.SOURCE.C.PROJ1.PGM
MINEG00	MINEG00	ChgEGKezVerarb	stdout	Y	printf	"Ön cod_vorg_detail %d", pstrEG -> cod_vorg_detail	SYSPRINT	DATA.XXR.SOURCE.C.PROJ1.PGM
MINEG00	MINEG00	ChgEGKezVerarb	stdout	Y	printf	"Ön kez_verarbeitung %c", pstrEG -> kez_verarbeitung	SYSPRINT	DATA.XXR.SOURCE.C.PROJ1.PGM
MINEG00	MINEG00	ChgEGKezVerarb	stdout	Y	printf	"Ön cod_mandant %c", pstrEG -> cod_mandant	SYSPRINT	DATA.XXR.SOURCE.C.PROJ1.PGM
MINEG00	MINEG00	ChgEGKezVerarb	stdout	Y	printf	"Ön cod_system %d", pstrEG -> cod_system	SYSPRINT	DATA.XXR.SOURCE.C.PROJ1.PGM
MINEG00	MINEG00	ChgEGKezVerarb	stdout	Y	printf	"Ön nr_sammel %d", pstrEG -> nr_sammel	SYSPRINT	DATA.XXR.SOURCE.C.PROJ1.PGM
MINEG00	MINEG00	ChgEGKezVerarb	stdout	Y	printf	"Ön cod_buch_typ %d", pstrEG -> cod_buch_typ	SYSPRINT	DATA.XXR.SOURCE.C.PROJ1.PGM
MINEG00	MINEG00	ChgEGKezVerarb	stdout	Y	printf	"Ön cod_vorgang %d", pstrEG -> cod_vorgang	SYSPRINT	DATA.XXR.SOURCE.C.PROJ1.PGM
MINEG00	MINEG00	ChgEGKezVerarb	stdout	Y	printf	"Ön id_extem %s", pstrEG -> id_extem	SYSPRINT	DATA.XXR.SOURCE.C.PROJ1.PGM
MINEG00	MINEG00	ChgEGKezVerarb	stdout	Y	printf	"Ön dat_abgabe %s", pstrEG -> dat_abgabe	SYSPRINT	DATA.XXR.SOURCE.C.PROJ1.PGM
MINEG00	MINEG00	ChgEGKezVerarb	stdout	Y	printf	"Ön dat_faellig %s", pstrEG -> dat_faellig	SYSPRINT	DATA.XXR.SOURCE.C.PROJ1.PGM
MINEG00	MINEG00	ChgEGKezVerarb	stdout	Y	printf	"Ön dat_verarbeitung %s", pstrEG -> dat_verarbeitung	SYSPRINT	DATA.XXR.SOURCE.C.PROJ1.PGM
MINFP00	MINFP00	InsFPProtokoll	stdout	Y	printf	"ÖnÖn----- Fehlerprotokoll MINFP00 "	SYSPRINT	DATA.XXR.SOURCE.C.PROJ1.PGM
MINFP00	MINFP00	InsFPProtokoll	stdout	Y	printf	"-----Ön"	SYSPRINT	DATA.XXR.SOURCE.C.PROJ1.PGM
MINFP00	MINFP00	InsFPProtokoll	stdout	Y	printf	"User: %sÖn" id_user h	SYSPRINT	DATA.XXR.SOURCE.C.PROJ1.PGM

Connected as: P392E, file: XX37T#14

Lines: 1967

These programs are writing to the console

C - Files

XINFO PC Client - C - File Access (Grouped)

File Home Table Netplan Barchart Chart Script View Style

Copy Select All Toggle Selection Edit Customize Use Default Use Custom Table Layout Group Statistics All Table Functions Show SQL Inverse Filter Tools New Library Chart

Workspace Tree

Count	Stmt-Mem
<all>	<all>
37	AMQSMON0
42	AMQSPRMA
32	AMQSQRMA
61	CSQ4BCG1
29	CSQ4BCJ1
31	CSQ4BCK1
16	MIN0000
27	MIN1050
2	MIN1060
4	MIN1070
16	MIN1080
3	MIN1100
1	MIN1103
4	MIN1110
16	MIN1120
1	MIN1130
15	MIN1140
13	MIN1150
3	MIN1160

Connected as: P392E, file: XX37T#14

Lines: 181

All members where "stdout" is used, column Count shows you how often

C – DB2 Access

The screenshot shows the XINFO PC Client interface with the 'C - DB2 Access' dialog box open. The dialog box contains a list of fields for configuring access to a DB2 table. The 'Object' field is highlighted with a red box and contains the text '*Konto|'. A callout bubble points to this field with the text 'Which programs are updating table "VCONA"?'.

Field	Value
Member/Source	=
Member with Stmt.	=
SubSys	=
Prefix	=
Object	= *Konto
Object Type	=
Action	= UPDATE
Column Name	=
Column Usage	=
Lib/Dir	=
Lib/Dir with Stmt.	=
Prepro-Macro	=
Line	=
Load Module	=
System	=

Which programs are updating table "VCONA"?

C – DB2 Access

The screenshot shows the XINFO PC Client interface for DB2 Access. A callout box highlights that 'Program DSN8CC1 is the only program that updates table '*Konto''. The main window displays a table with columns: Member, Stmt-Mem, SubSys, Prefix, Object, Object Typ, Action, Column Name, Usage, Lib/Dir, Lib/Dir with Stmt., Prepro-Macro, Line, and Load. The table lists various database objects, including columns and table/views, with their respective actions and locations.

Member	Stmt-Mem	SubSys	Prefix	Object	Object Typ	Action	Column Name	Usage	Lib/Dir	Lib/Dir with Stmt.	Prepro-Macro	Line	Load
<all>	<all>	<all>	<...>	<all>	<all>	<all>	<all>	<all>	<all>	<all>	<all>	<...>	
MINBK00	MINBK00			TBIN_B_KONTO	COLUMN	UPDATE	COD_MANDANT	WHERE	DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.PGM		229	MIN
MINBK00	MINBK00			TBIN_B_KONTO	COLUMN	UPDATE	ID_FIBUKONTO	SET	DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.PGM		229	MIN
MINBK00	MINBK00			TBIN_B_KONTO	COLUMN	UPDATE	NR_KONTO	WHERE	DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.PGM		229	MIN
MINBK00	MINBK00			TBIN_B_KONTO	TABLE/VIEW	UPDATE			DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.PGM		229	MIN
MINBK00	MINBK00			TBIN_B_KONTO	COLUMN	UPDATE	COD_MANDANT	WHERE	DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.PGM		317	MIN
MINBK00	MINBK00			TBIN_B_KONTO	COLUMN	UPDATE	NR_KONTO	WHERE	DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.PGM		317	MIN
MINBK00	MINBK00			TBIN_B_KONTO	COLUMN	UPDATE	NR_SAD	SET	DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.PGM		317	MIN
MINBK00	MINBK00			TBIN_B_KONTO	TABLE/VIEW	UPDATE			DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.PGM		317	MIN
MINBK00	MINBK00			TBIN_B_KONTO	COLUMN	UPDATE	COD_MANDANT	WHERE	DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.PGM		407	MIN
MINBK00	MINBK00			TBIN_B_KONTO	COLUMN	UPDATE	NR_KONTO	WHERE	DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.PGM		407	MIN
MINBK00	MINBK00			TBIN_B_KONTO	COLUMN	UPDATE	NR_SCHECK	SET	DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.PGM		407	MIN
MINBK00	MINBK00			TBIN_B_KONTO	TABLE/VIEW	UPDATE			DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.PGM		407	MIN
MINKB91	MINKB91			TBIN_K_KONTO	COLUMN	UPDATE	COD_MANDANT	WHERE	DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.PGM		949	MIN
MINKB91	MINKB91			TBIN_K_KONTO	COLUMN	UPDATE	KEZ_OFFENE_FORD	SET	DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.PGM		949	MIN
MINKB91	MINKB91			TBIN_K_KONTO	COLUMN	UPDATE	KEZ_OFFENE_FORD	WHERE	DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.PGM		949	MIN
MINKB91	MINKB91			TBIN_K_KONTO	TABLE/VIEW	UPDATE			DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.PGM		949	MIN
MINKB91	MINKB91			TBIN_K_KONTO	COLUMN	UPDATE	COD_MANDANT	WHERE	DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.PGM		958	MIN
MINKB91	MINKB91			TBIN_K_KONTO	COLUMN	UPDATE	KEZ_OFFENE_FORD	SET	DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.PGM		958	MIN

Connected as: P392E, file: XX37T#14 Lines: 245

C - Variables

The screenshot shows the 'C - Variables' dialog box. The 'Workspace Tree' on the left shows the project structure, with 'Variables' highlighted under the 'C' folder. The dialog box contains a table of variables:

Member/Source	Member with Stmt.	Variable Name	Type	Initial Value	Dimensions	External Y/N	Static Y/N	Auto Y/N	Register Y/N	Used Y/N	Lib/Dir	Lib/Dir with Stmt.	Prepro-Macro	Line	Load Module	System
MINXC*	OCP*															

A callout bubble points to the first two rows of the table with the text: "Which variables are declared, but not used?"

C - Variables

XINFO PC Client - C - Variables

File Home Table Netplan Barchart Chart Script View

Copy Select All Toggle Selection Edit Customize Use Default Use Custom Table Layout Group Statistics All Table Functions Show SQL Inverse Filter Tools New Library Chart

Workspace Tree

Member	Stmt-Mem	Variable Name	Type	Initial Value	Dime	Ext	Stat	Auto	Reg	Used	Lib/Dir	Lib/Dir with Stmt.	Prepro-Macro	Line	Load
<all>	<all>	<all>	<all>	<all>	<all>	<all>	<all>	<all>	<all>	<all>	<all>	<all>	<all>	<all>	<all>
MINXC20	OCPC002	ps_dc_steuer_pam	PSDCSTEUERPARM	?	0	N	Y	N	N	N	DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.INC		44	MINX
MINXC20	OCPC002	ps_dc_aktion	PSDCAKTION	?	0	N	Y	N	N	N	DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.INC		45	MINX
MINXC20	OCPC002	ps_dc_info	PSDCINFO	?	0	N	Y	N	N	N	DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.INC		46	MINX
MINXC20	OCPC002	ps_dc_mid	PSDCMID	?	0	N	Y	N	N	N	DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.INC		47	MINX
MINXC20	OCPC002	ps_dc_mod	PSDCMOD	?	0	N	Y	N	N	N	DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.INC		48	MINX
MINXC20	OCPC002	ps_dc_spa	PSDCSPA	?	0	N	Y	N	N	N	DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.INC		49	MINX
MINXC20	OCPC002	DC_Next_Vorgang	int_t	?	0	N	Y	N	N	N	DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.INC		53	MINX
MINXC20	OCPC002	DC_Retcode	int_t	?	0	N	Y	N	N	N	DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.INC		54	MINX
MINXC25	OCPC002	ps_dc_steuer_pam	PSDCSTEUERPARM	?	0	N	Y	N	N	N	DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.INC		44	MINX
MINXC25	OCPC002	ps_dc_aktion	PSDCAKTION	?	0	N	Y	N	N	N	DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.INC		45	MINX
MINXC25	OCPC002	ps_dc_info	PSDCINFO	?	0	N	Y	N	N	N	DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.INC		46	MINX
MINXC25	OCPC002	ps_dc_mid	PSDCMID	?	0	N	Y	N	N	N	DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.INC		47	MINX
MINXC25	OCPC002	ps_dc_mod	PSDCMOD	?	0	N	Y	N	N	N	DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.INC		48	MINX
MINXC25	OCPC002	ps_dc_spa	PSDCSPA	?	0	N	Y	N	N	N	DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.INC		49	MINX
MINXC25	OCPC002	DC_Next_Vorgang	int_t	?	0	N	Y	N	N	N	DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.INC		53	MINX
MINXC25	OCPC002	DC_Retcode	int_t	?	0	N	Y	N	N	N	DATA.XXR.SOURCE.C.PROJ1.PGM	DATA.XXR.SOURCE.C.PROJ1.INC		54	MINX

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Lines: 16

The result shows all members (lines) where unused variables are declared

C - Types

The screenshot shows the XINFO PC Client interface. On the left is the 'Workspace Tree' with folders for Programs, Source, Assembler, C, COBOL, Easytrieve, Java, Natural, and PL/I. The 'C' folder is expanded to show sub-items like General Info, Includes, System Calls, Functions, File Access, Functions Calls, DB2 Access, CICS Access, DLI Access, MQSeries Calls, Variables, and Types. The 'Types' item is selected. A dialog box titled 'C - Types' is open in the foreground, listing various attributes with dropdown menus and text input fields. The 'Type Name' attribute is highlighted with a red rectangle and contains the text '*BOOL*'. A callout bubble points to this field with the text 'Which programs are using streams?'. At the bottom of the dialog are 'OK', 'Actions', and 'Cancel' buttons. The status bar at the bottom of the client shows 'Connected as: P392E, file: XX37T#14'.

Attribute	Value
Member/Source	=
Line	=
Is Structure Y/N	=
Is Class Y/N	=
Type Name	*BOOL*
Lib/Dir	=
Load Module	=
Lib/Dir with Stmt.	=
Member with Stmt.	=
Prepro-Macro	=
System	=

Which programs are using streams?

C - Types

XINFO PC Client - C - Types

File Home Table Netplan Barchart Cha

Here are all lines where bool are used ...

Member	Line	Struct	Class	Type-Name	Lib/Dir				Stmt-Mem	Prepro-Macro	System
<all>	<all>	<all>	<all>	<all>	<all>	<all>	<all>	<all>	<all>	<all>	<all>
MCP0600	37	N	N	boolean_t	DATA.XXR.SOURCE.C.PROJ1.PGM	MCP0600	DATA.XXR.SOURCE.C.PROJ1.INC	XZDCA02			CPROJ1
MCP5006	37	N	N	boolean_t	DATA.XXR.SOURCE.C.PROJ1.PGM	MCP5006	DATA.XXR.SOURCE.C.PROJ1.INC	XZDCA02			CPROJ1
MINAA00	67	N	N	BOOL	DATA.XXR.SOURCE.C.PROJ1.PGM	MINAA00	DATA.XXR.SOURCE.C.PROJ1.INC	XINYP99			CPROJ1
MINAA01	67	N	N	BOOL	DATA.XXR.SOURCE.C.PROJ1.PGM	MINAA01	DATA.XXR.SOURCE.C.PROJ1.INC	XINYP99			CPROJ1
MINAB00	67	N	N	BOOL	DATA.XXR.SOURCE.C.PROJ1.PGM	MINAB00	DATA.XXR.SOURCE.C.PROJ1.INC	XINYP99			CPROJ1
MINAP11	67	N	N	BOOL	DATA.XXR.SOURCE.C.PROJ1.PGM	MINAP11	DATA.XXR.SOURCE.C.PROJ1.INC	XINYP99			CPROJ1
MINBB00	67	N	N	BOOL	DATA.XXR.SOURCE.C.PROJ1.PGM	MINBB00	DATA.XXR.SOURCE.C.PROJ1.INC	XINYP99			CPROJ1
MINBB01	67	N	N	BOOL	DATA.XXR.SOURCE.C.PROJ1.PGM	MINBB01	DATA.XXR.SOURCE.C.PROJ1.INC	XINYP99			CPROJ1
MINBB10	67	N	N	BOOL	DATA.XXR.SOURCE.C.PROJ1.PGM	MINBB10	DATA.XXR.SOURCE.C.PROJ1.INC	XINYP99			CPROJ1
MINBB30	67	N	N	BOOL	DATA.XXR.SOURCE.C.PROJ1.PGM	MINBB30	DATA.XXR.SOURCE.C.PROJ1.INC	XINYP99			CPROJ1
MINBB31	67	N	N	BOOL	DATA.XXR.SOURCE.C.PROJ1.PGM	MINBB31	DATA.XXR.SOURCE.C.PROJ1.INC	XINYP99			CPROJ1
MINBB32	67	N	N	BOOL	DATA.XXR.SOURCE.C.PROJ1.PGM	MINBB32	DATA.XXR.SOURCE.C.PROJ1.INC	XINYP99			CPROJ1
MINBB80	67	N	N	BOOL	DATA.XXR.SOURCE.C.PROJ1.PGM	MINBB80	DATA.XXR.SOURCE.C.PROJ1.INC	XINYP99			CPROJ1
MINBB81	67	N	N	BOOL	DATA.XXR.SOURCE.C.PROJ1.PGM	MINBB81	DATA.XXR.SOURCE.C.PROJ1.INC	XINYP99			CPROJ1
MINBK00	67	N	N	BOOL	DATA.XXR.SOURCE.C.PROJ1.PGM	MINBK00	DATA.XXR.SOURCE.C.PROJ1.INC	XINYP99			CPROJ1
MINBK01	67	N	N	BOOL	DATA.XXR.SOURCE.C.PROJ1.PGM	MINBK01	DATA.XXR.SOURCE.C.PROJ1.INC	XINYP99			CPROJ1
MINDA00	67	N	N	BOOL	DATA.XXR.SOURCE.C.PROJ1.PGM	MINDA00	DATA.XXR.SOURCE.C.PROJ1.INC	XINYP99			CPROJ1
MINDA10	67	N	N	BOOL	DATA.XXR.SOURCE.C.PROJ1.PGM	MINDA10	DATA.XXR.SOURCE.C.PROJ1.INC	XINYP99			CPROJ1
MINDD00	67	N	N	BOOL	DATA.XXR.SOURCE.C.PROJ1.PGM	MINDD00	DATA.XXR.SOURCE.C.PROJ1.INC	XINYP99			CPROJ1
MINDD01	67	N	N	BOOL	DATA.XXR.SOURCE.C.PROJ1.PGM	MINDD01	DATA.XXR.SOURCE.C.PROJ1.INC	XINYP99			CPROJ1
MINDD10	67	N	N	BOOL	DATA.XXR.SOURCE.C.PROJ1.PGM	MINDD10	DATA.XXR.SOURCE.C.PROJ1.INC	XINYP99			CPROJ1
MINDF00	67	N	N	BOOL	DATA.XXR.SOURCE.C.PROJ1.PGM	MINDF00	DATA.XXR.SOURCE.C.PROJ1.INC	XINYP99			CPROJ1
MINDK00	67	N	N	BOOL	DATA.XXR.SOURCE.C.PROJ1.PGM	MINDK00	DATA.XXR.SOURCE.C.PROJ1.INC	XINYP99			CPROJ1
MINDU01	67	N	N	BOOL	DATA.XXR.SOURCE.C.PROJ1.PGM	MINDU01	DATA.XXR.SOURCE.C.PROJ1.INC	XINYP99			CPROJ1
MINFR00	67	N	N	BOOL	DATA.XXR.SOURCE.C.PROJ1.PGM	MINFR00	DATA.XXR.SOURCE.C.PROJ1.INC	XINYP99			CPROJ1

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C - Types

The screenshot shows the XINFO PC Client interface. The title bar reads "XINFO PC Client - C - Types (Grouped)". The ribbon includes tabs for File, Home, Table, Netplan, Barchart, Chart, Script, and View. The Table ribbon is active, showing options like Copy, Select All, Toggle Selection, Customize, Use Default, Use Custom, Group, Statistics, Show SQL, Inverse Filter, New, and Library. The main workspace displays a table with two columns: Count and Member. The Member column contains a list of identifiers, and a callout box points to this list with the text "... here is a list of all members where streams are used".

Count	Member
<all>	<all>
1	MCP0600
1	MCP5006
4	MIN0000
4	MIN1030
2	MIN1040
2	MIN1050
2	MIN1060
4	MIN1070
2	MIN1080
2	MIN1090
2	MIN1100
1	MIN1101
1	MIN1102
1	MIN1103
2	MIN1110
2	MIN1120
2	MIN1130
2	MIN1140
2	MIN1150

... here is a list of all members where streams are used

Thanks for your attention! Do you have any questions?

The logo for 'HORIZONT' features the word in a bold, sans-serif font. The letter 'O' is highlighted in red, while the other letters are in dark grey. The background is light grey with a large red curved shape on the left and several faint, semi-transparent geometric shapes (squares and circles) scattered around.

HORIZONT

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