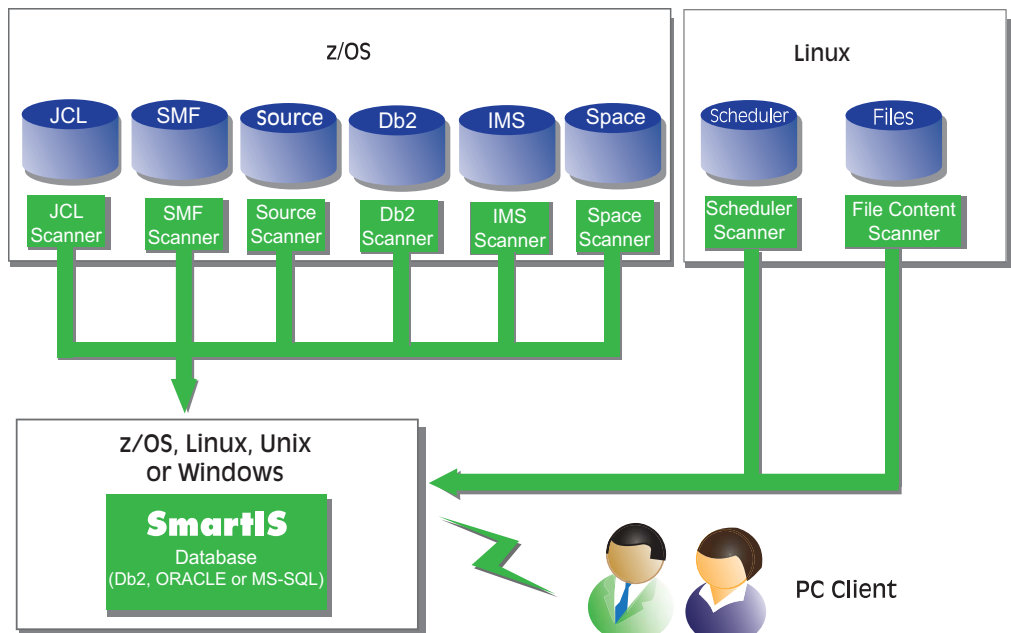





What is SmartIS?

SmartIS is a *Smart Information System* designed for today's mainframe data centers. SmartIS automatically collects and correlates data from the areas of:

- Operations Management
- Production Planning
- Application Development
- Quality Assurance and Integration
- Disaster Recovery and Conversions
- End-user departments



Once data has been collected into the SmartIS repository, authorized users can issue queries to cross-reference, verify and analyze data, and produce graphs of all data structures. Pre-defined queries can be tailored to provide specific views and formats. Queries can also be scheduled to run in batch mode.



SmartIS provides for comprehensive evaluations of different data, (e.g. CA-7, IWS, ZEKE, Control-M, CA-JobTrac, CA-Scheduler, Automic, Db2, JCL, SMF, IMS, CA-1, RMM, COBOL, PL/1, report writers, etc.) – all using one common dialog and a single user interface.

Authorized users can create their own queries, without the requirement of programming, SQL, or database knowledge. Traditional tools such as SPUFI or QMF become unnecessary.

Utilizing the uniform interface, there's no need to use different access methods and languages to “jump” from data source to data source. Users can navigate freely from screen to screen.

SmartIS is also an **open system**, which allows for the integration of “custom” data sources. Site-specific tailor-made solutions can be fully utilized and are not made redundant.

Unlike “other products”, SmartIS was designed to run across all Windows platforms.

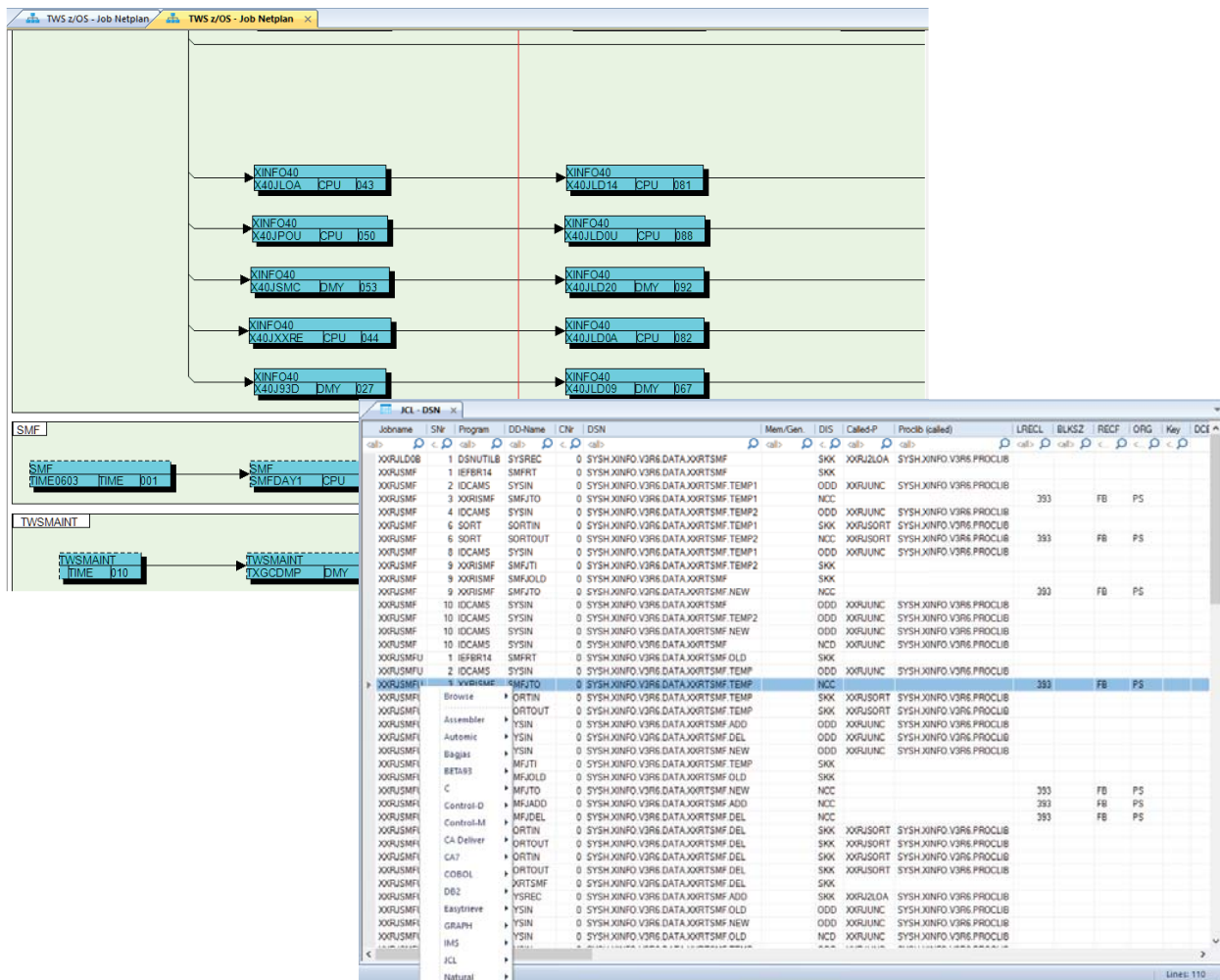
Who should use SmartIS?

Anyone who needs to query data structures, but especially:

| | |
|-----------------------|---------------------|
| Production Control | Development |
| Production Scheduling | Integration Testing |
| Operations | Applications |
| Technical Services | Quality Assurance |
| Help Desks | Conversion Teams |
| IT Auditors | |

Why should *you* use SmartIS?

A graphical view of your data says more than a thousand words!



Actually being able to *visualize* your Production on a screen can help you find solutions and answers much faster than wading through lists and reports.

But some people really like lists...

So wouldn't it be great to "jump" from one list of results to another, without having to exit the program and use a new dialog?

SmartIS won't stop you from doing that! In fact, it's easy.



Submit queries, such as:

- My Job "Sales" failed, how can I re-start it?
- Show me all datasets that use payroll applications because we need to make some tax code changes.
- What is going to be affected in the rest of today's schedule?
- How many jobs ran last week? How many of those abended? Of those jobs which abended, which ones used the DB2 table nnn?
- Show me a graph of my SMF data as I need to see all anomalies during the past month.
- Which DB2 tables are processed by which jobs and programs?
- When was dataset A.B.C. last closed successfully?
- What datasets were in use last night between 1:30 and 3:43 a.m.?
- What jobs (JCL members) have programs with suffix *TABC?
- What tapes do we need for the disaster recovery test?
- Which successors does a certain job have?
- Which COBOL programs use copy member ABC?
- Which PSB's are used in which jobs?
- Which datasets are updated by program ABC?
- Show all jobs in JCLLIBS which are not defined in IWS!
- Show all procs in PROCLIB which are not referenced by jobs (orphaned).
- What was in this script file last week?

How does SmartIS work?

SmartIS consists of two main components:

- An ISPF interface for the Host
- A PC Client

The ISPF Interface

For z/OS data centers, ISPF is often still the best dialog system. The SmartIS ISPF dialog provides (customizable) selection criteria in pre-defined panels. The results are displayed in tables and lists. The advantages here are:

- No need for any user-specific configuration.
- Minimal training for users.
- Complete integration of all ISPF tools (Listcat, Browse, ...)
- Easy to use. Only three steps to get to the result.

1 - Select Panel

```
----- SmartIS - Startpanel -----
Command ==>

0 - Options
1 - JCL - JOB Statements
2 - JCL - JES Statements
3 - JCL - EXEC Statements
4 - JCL - DSN
5 - History - Job Run Times
6 - History - SMF Information
7 - History - DB2 Table Ref.
8 - History - Dataset Usage
```

2 - Specify Search Criteria

```
----- Search Arguments JCL JOB Statements -----
Command ==>
Top : BATCH Build JCL END Leave OPT Options

Jobname          ==> EQ #DB2*_____
Account          ==> EQ _____

Programmers Name ==> EQ _____
CLASS           ==> EQ _____
MSGCLASS       ==> EQ _____
NOTIFY        ==> EQ _____
PRIORITY      ==> EQ _
REGION        ==> EQ _____
```

3 - Get Results!

```
----- History - Job Run Times -----
Command ==>
Top : Legend SAVE SORT Find STAT LIBS BATCH Arrange EXit
Bottom: ? List all Line Commands S Select A Appl. R Run Cycles
Browse Job JT Job/Table Q PGM/PSB CP OPC-CP SI SYSIN ...

Application ID  ON  Jobname      Job Start Time      Job End Time
.. ACW5000000A  003 #DB2IMS  19.01.1999,20:00    19.01.1999,30:00
.. ACW5000000A  003 #DB2IMS  18.01.1999,20:00    18.01.1999,20:00
.. ACW5000000A  004 #DB2IMS  19.01.1999,20:00    19.01.1999,20:06
.. ACS5000000A  004 #DB2IMS  `8.0`.`999,20:00    18.01.1999,20:02
```

The PC Client

Using the SmartIS PC Client, you can simply and securely access all information directly from your PC.

- Simple and secure access to SmartIS from every PC.
- No need for TSO sessions.
- Multiple windows, printing, zooming.
- Works with windows.
- Easy to install.
- Easy to learn and use.

The screenshot displays the SmartIS PC Client interface, which is a web-based application running in a browser. The interface is divided into several sections:

- Step 1: Select Entry Point** - A blue callout box with a downward arrow points to the 'Workspace Tree' on the left side of the screen. The tree shows a hierarchy of folders, including 'Scheduler', 'Automatic', 'Bagsis', 'CA7', 'Control-M', 'TWS z/OS', 'TWS distributed', 'Zeke', 'JCL', 'DB2', 'CICS', 'IMS', 'SMF', 'Job Information', 'Step Information', 'Dataset Usage', 'zFS file usage', 'CICS Monitor Tran', 'Printer', 'Jobruntime Barchart', 'Space', 'PO', 'Output', 'Programs', 'Source', 'XINFO', 'Universal', 'IT-Charts', and 'Tabellen IT Charts'. The 'SMF' folder is selected.
- Step 2: Specify Search Criteria** - A blue callout box with a leftward arrow points to the 'SMF - Job Information' form in the center. This form contains various input fields for filtering search results, such as 'Jobname', 'Jeaname', 'Owner', 'System ID', 'Return-Code', 'Start Time', 'End Time', 'Duration (sec)', 'Account', 'Job Class', 'Work Type', 'Submit Time', 'CPU-Time (sec)', 'EXCP', 'Wait for Init. hs', and 'Waits for Enq. hs'. Each field has a dropdown menu or a text input box.
- Step 3: Get Results!** - A blue callout box with a leftward arrow points to a table of search results. The table has columns for 'Jobname', 'Jeaname', 'Owner', 'Syst', 'RC', 'Start-Time', and 'End-Time'. The results are displayed in a grid format, showing a list of jobs and their associated details.

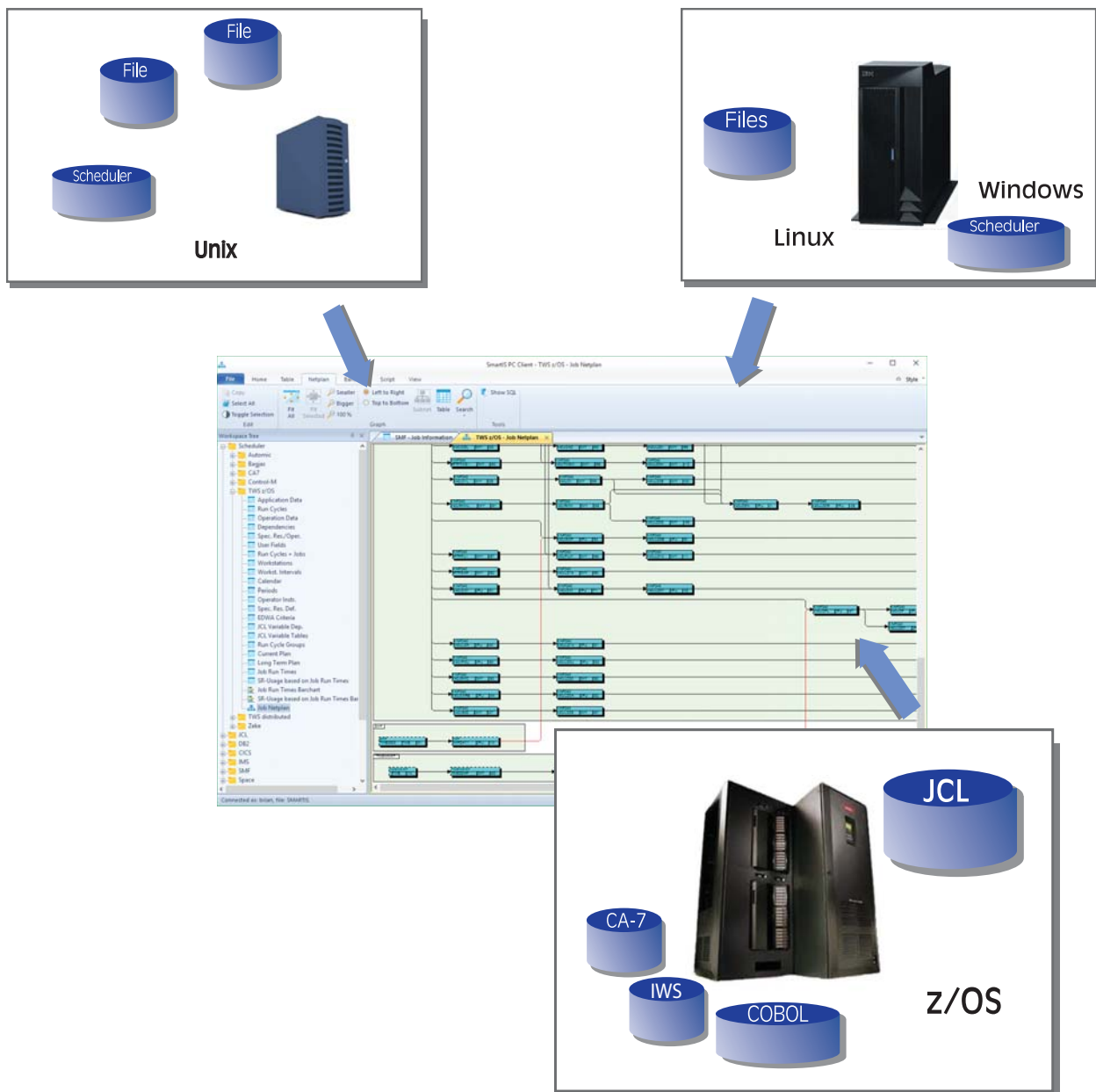
The interface also includes a top menu bar with options like 'File', 'Home', 'Table', 'Netplan', 'Barchart', 'Script', and 'View'. A status bar at the bottom indicates 'Connected as: brian, file: SMARTIS' and 'Lines: 5000'.

What is SmartIS Distributed?

SmartIS Distributed collects information about files and schedulers from AIX, Solaris, Linux, and Windows machines.

This data is loaded into the centralized database, enabling users to query details from several different platforms, all with one single application.

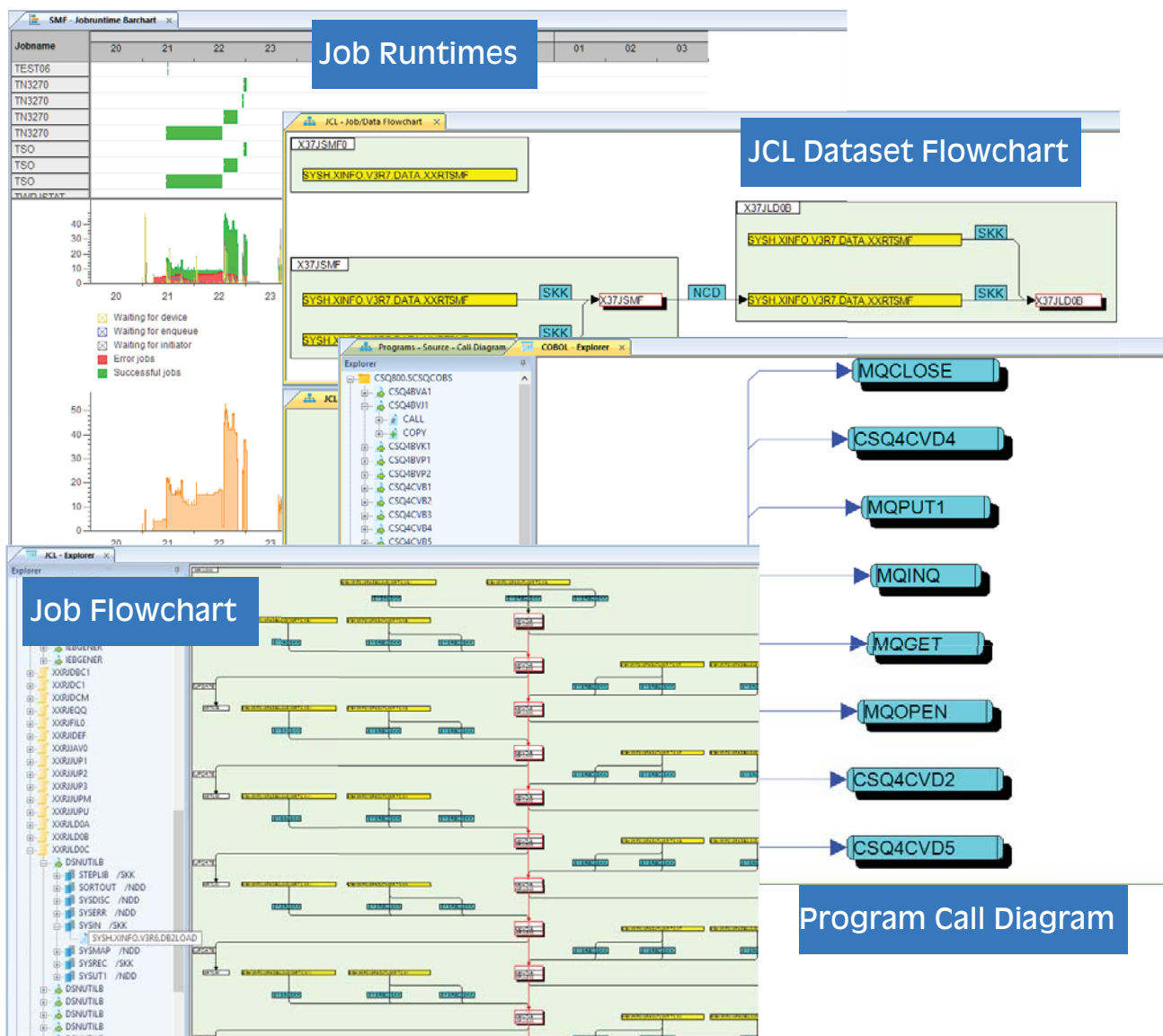
Reports and statistical functions help you to better understand your IT infrastructure.



What do the SmartIS Graphics look like?

Using the PC Client, SmartIS enables you to create graphics based on Job Scheduling data and JCL.

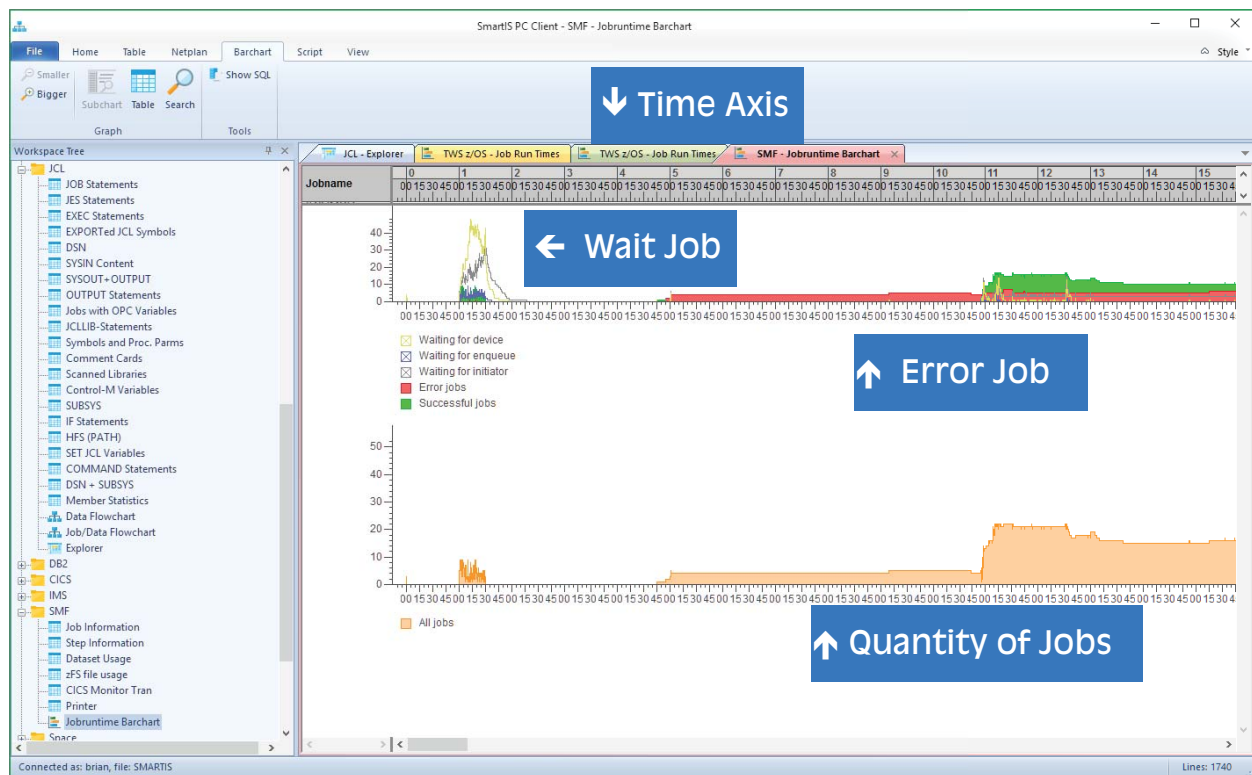
- Barcharts display the job runtimes based on SMF.
- Netplans display the job flow based on scheduler data.
- JCL and Dataset flowcharts.
- Source explorer.
- Call Diagrams (main program / sub program).



Barcharts

Barcharts present the job history as an easy-to-read graphic. Colors can be customized, e.g. jobs with waits or errors can be shown in contrasting colors. In one single, comprehensive graph, the SMF Barchart displays:

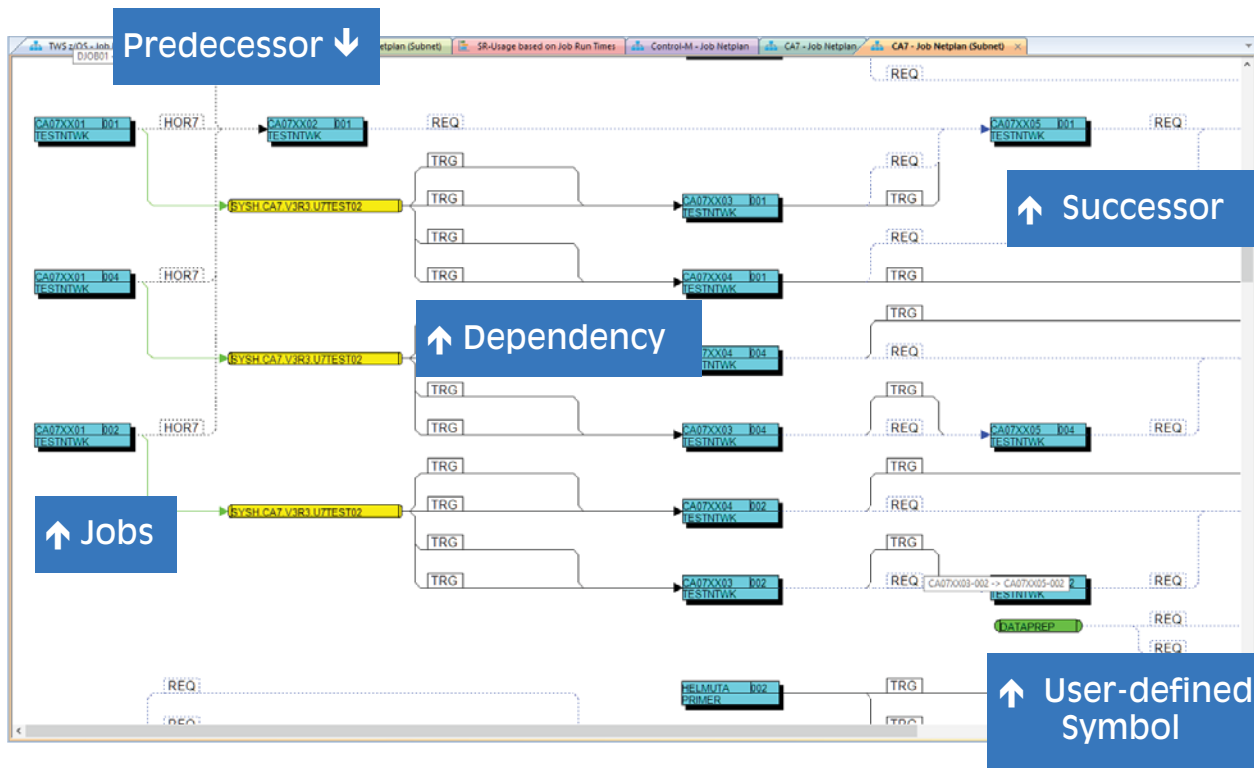
- The start and end time of every single job.
- The (un)successful execution of every single job.
- The wait time of every single job.
- The total quantity of jobs at a certain time.
- The quantity of error jobs at a certain time.
- The quantity of wait jobs at a certain time



The Job Netplan

SmartIS analyzes scheduling data (IWS, CA-7, Control-M, ZEKE, CA-JobTrac, CA-Scheduler, and Automic), and displays jobs and their dependencies in a clear way. Information is presented as an easy-to-understand netplan. Symbols can be customized for clarity and convenience. In one single, comprehensive graph, the netplan displays:

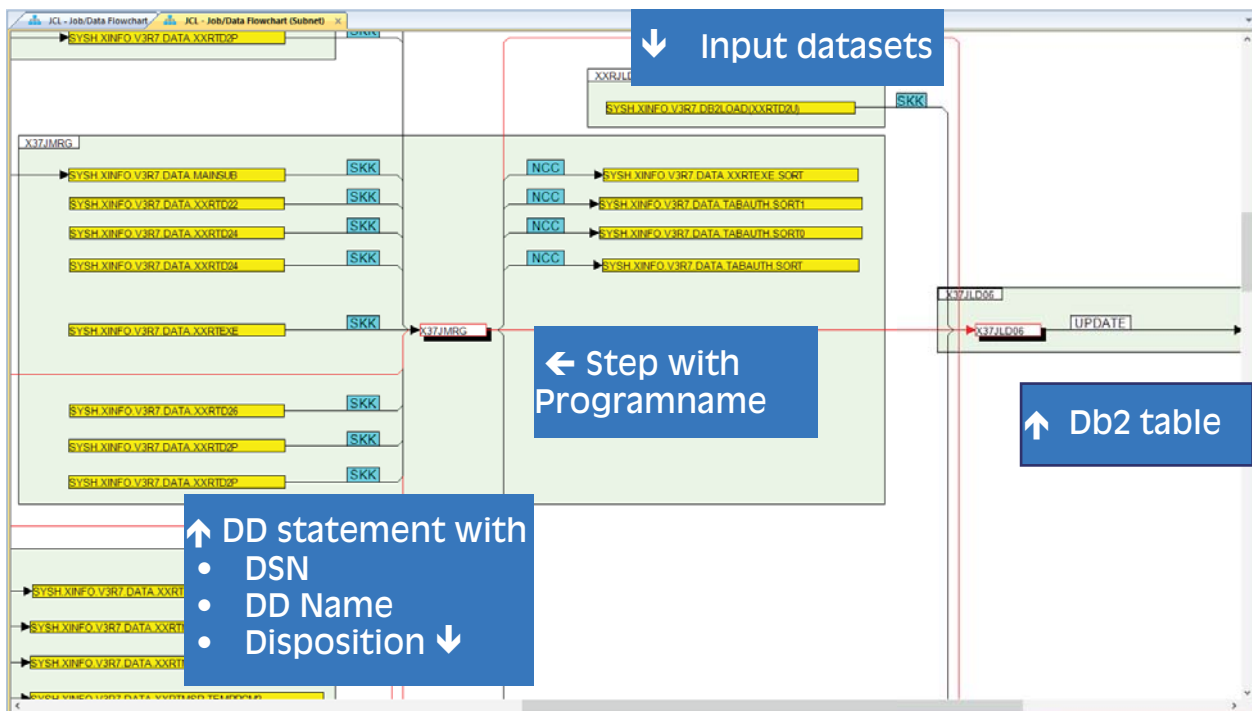
- All important data fields for every job.
- All predecessors.
- All successors.
- All different link types (all dependencies in IWS, trigger, not-parallel or requirements in CA-7, conditions in Control-M, etc.)



The Data Flowchart

SmartIS analyzes JCL and displays datasets and programs in a clear way. The JCL is represented as a flowchart. All symbols and line types can be customized to suit your requirements, e.g.: the background color or the font size, etc. The flowchart displays:

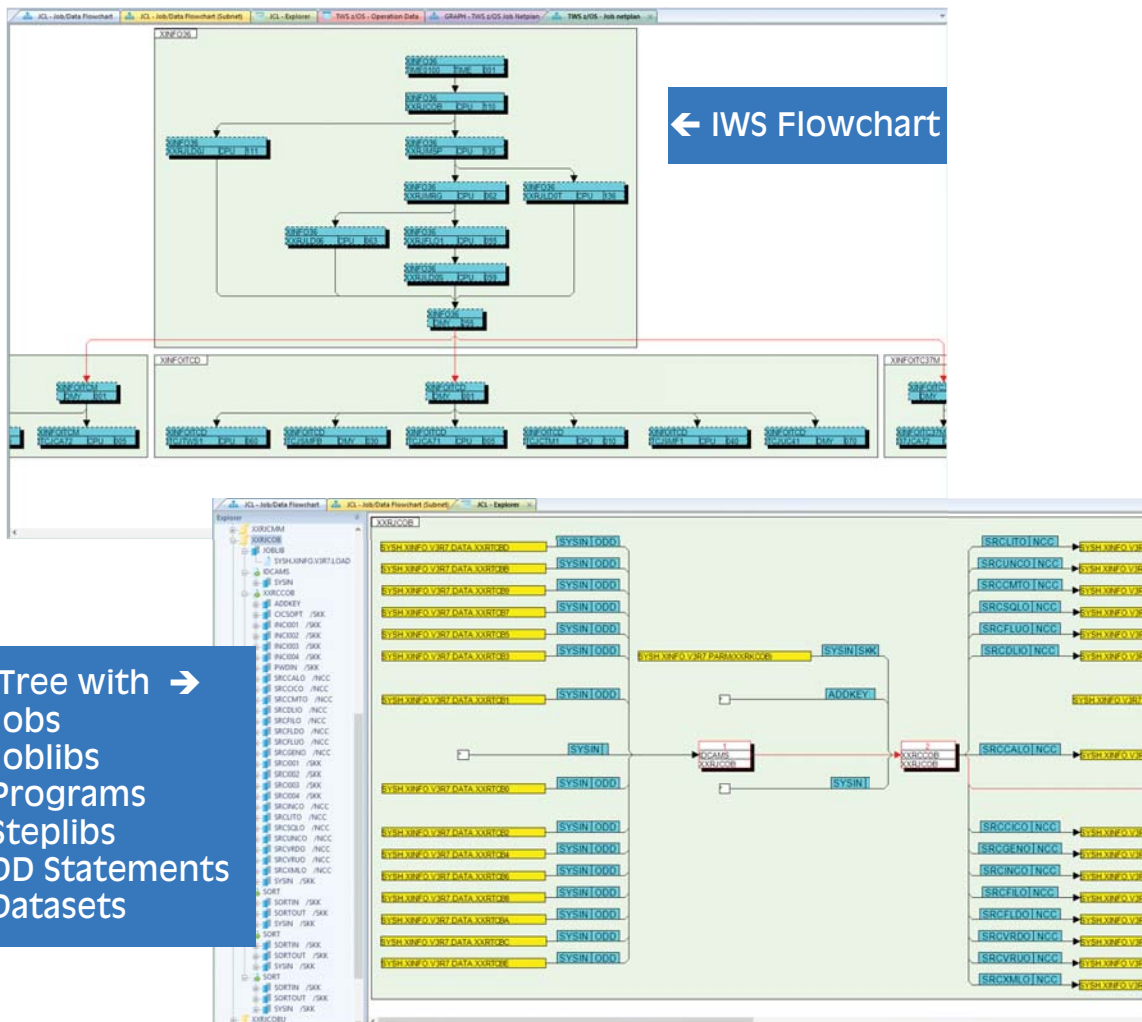
- Steps
- Programs
- Db2 tables
- Datasets
- DD statements
- Disposition parameters



The JCL Explorer

The JCL Explorer gives fast access to job netplans and dataset flowcharts, which can be activated using a single mouse click by the user. The Explorer displays the most important scheduler and JCL information:

- Jobs
- Dependencies
- Programs
- Datasets

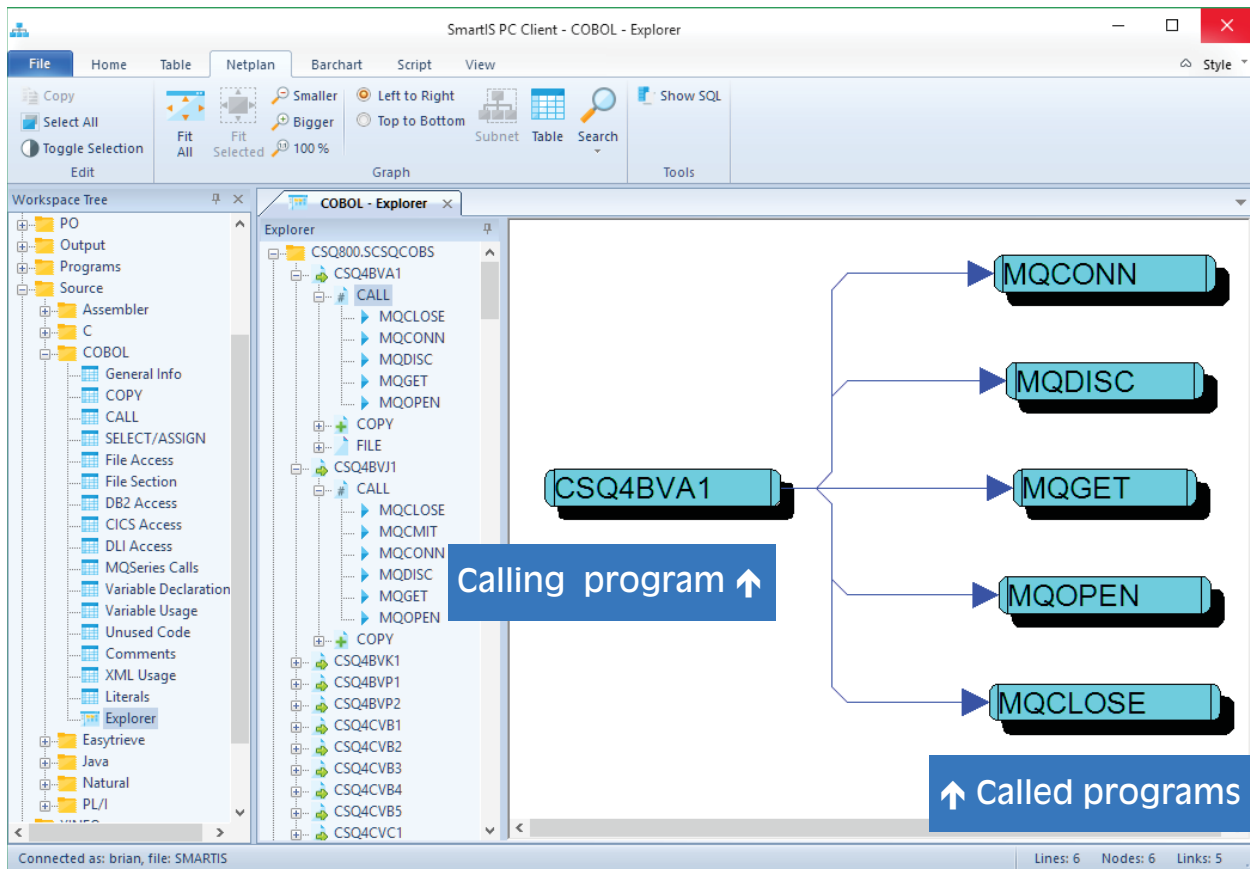


Analysis of Program Source Code

In addition to production data, SmartIS also analyzes program source code. With the inclusion of this data, SmartIS becomes an extensive IT information system. Application development and production planning can now answer questions, such as:

- Which main programs call which sub programs?
- Which copy members are included by which main programs?
- Which programs access a specific Db2 table?
- Which programs use dynamic SQL?

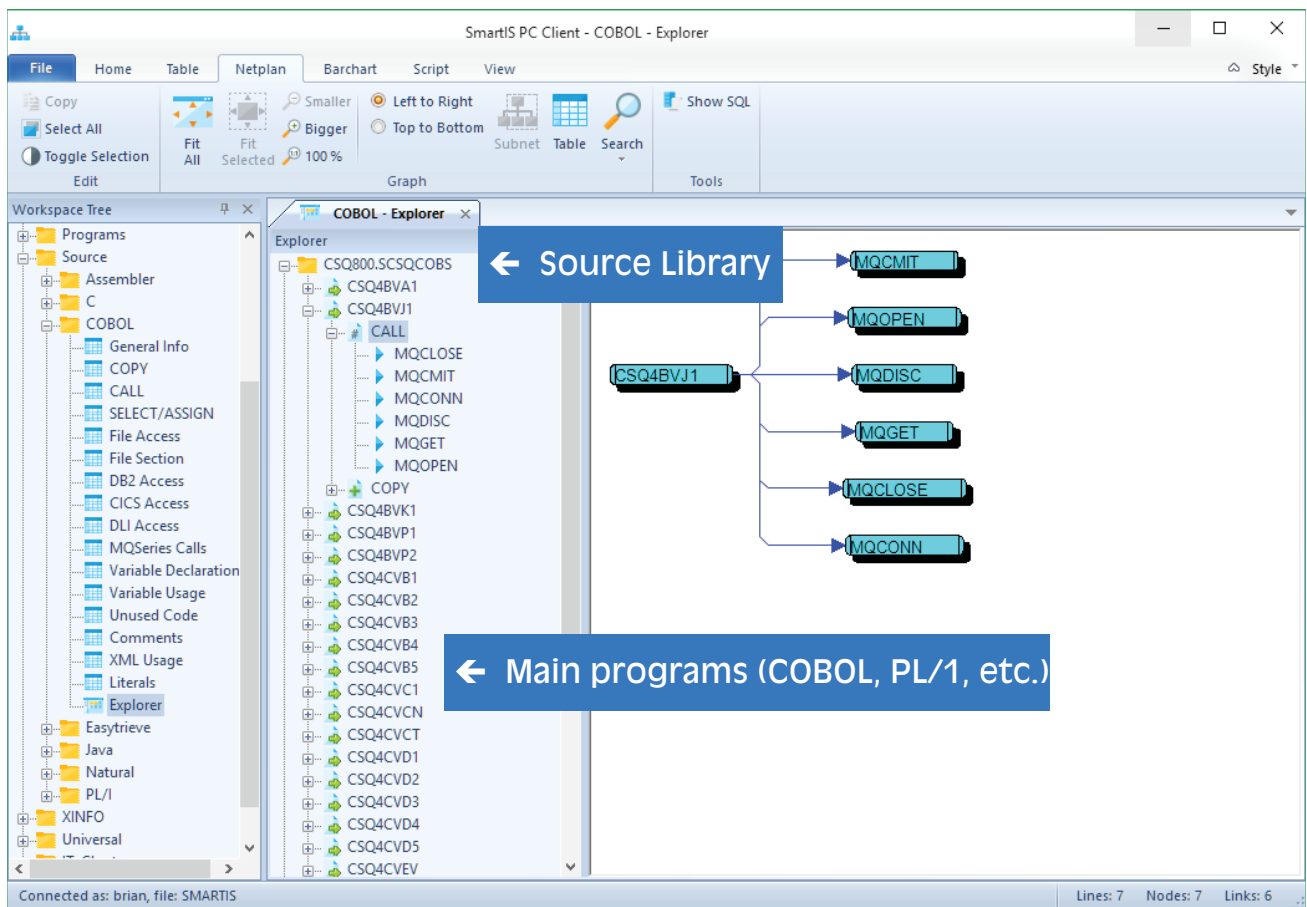
Of course the result of the analysis is also represented graphically, for example: the relationships of main programs to subprograms.



The Source Explorer

The SmartIS source explorer shows the essential program elements in a tree chart:

- Main programs
- Sub programs
- Copy and include member
- Sequential file access
- Db2 access
- CICS statements



SmartIS collects information from:

Mainframe

- JCL
- SMF
- Db2, IMS, ADABAS
- IWS z/OS, CA-7, Control-M, CA-JobTrac, ZEKE, CA-Scheduler, IWS distributed, Automic
- MVS catalog, VSAM statistics, PO datasets
- HSM backup & migration info, SMS
- CA-1, RMM (tape management)
- Source Code (PL/1, COBOL), Assembler, Java, C/C++. Natural
- BETA94, Control-D, Easytrieve, CA-Delivery
- CICS and CICS SMF data
- LOAD module data
- PO Scanner
- CA-Disc
- BETA92 EJM

Distributed Systems

- Scheduling: IWS, Automic, Control-M, Crontab
- File content
- Historical content
- Eclipse Plugin support



Features/Benefits

SmartIS is an Open System

- Integrates new data easily.
- Integrates existing applications.
- Installs much faster than “other products”.
- Extremely efficient analysis programs.
- Easy to learn.
- Panels can be tailored to meet individual requirements.
- Queries can be set to run in foreground or in batch.
- Reports can be exported in a variety of formats (e.g.: HTML, WMF, etc.)
- No SPUFI or QMF required.
- End users require no programming or SQL knowledge.
- Improves Quality of data.
- Improves service for data center customers.
- Saves time and money searching for data.
- Powerful IT-chart reporting
- IWS performance tuning
- Create your own solutions

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