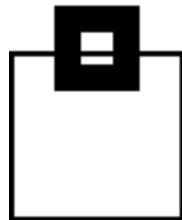


POPCon for OPC/ESA

Production Order Processing and Control

PRODUCT DESCRIPTION



SE Tools for OPC

THIRD EDITION (January 1998)

This edition applies to Version 2 Release 1.1 of PPOPCon for OPC/ESA.

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POPCon for OPC/ESA Version 2.11

Production

Order

Processing and

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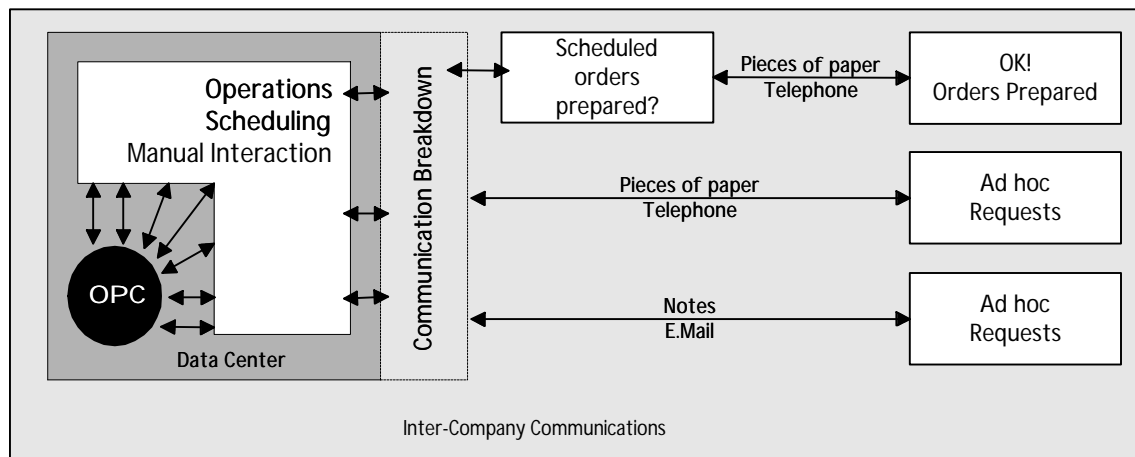
The Optimization People
Just What You Really Need

Is there a communication breakdown between your data center and end-user departments?

The current situation in a modern data center is characterized by:

- A constantly increasing number of users. Specifically, end-users who are not familiar with data center operations.
- Procedures with constantly growing complexity and dependencies requiring manual intervention.
- The necessity to process these procedures with the utmost flexibility in order to support an ever changing environment.
- The need to automate production in the data center.

The link between user requests and automated production control proves to be essential. As the interventions into order planning and processing become more complex, the volume of user requests and user supplied input also increases.



Then, ▷POPCon is the automation link you need!

The Production Order Processing and Control System, ▷POPCon, drastically improves these conditions within the data center environment. ▷POPCon automates the daily communication concerning batch processing between the end users in the departments and the computing center. It is a flexible, multi-purpose job ordering and management system. With ▷POPCon end users can directly:

- Send order requests to the job scheduling system ("ad hoc order requests").
- Provide necessary input and control data for planned OPC/ESA applications ("scheduled order requests").
- Provide department or application specific JCL for scheduled or ad hoc order requests.

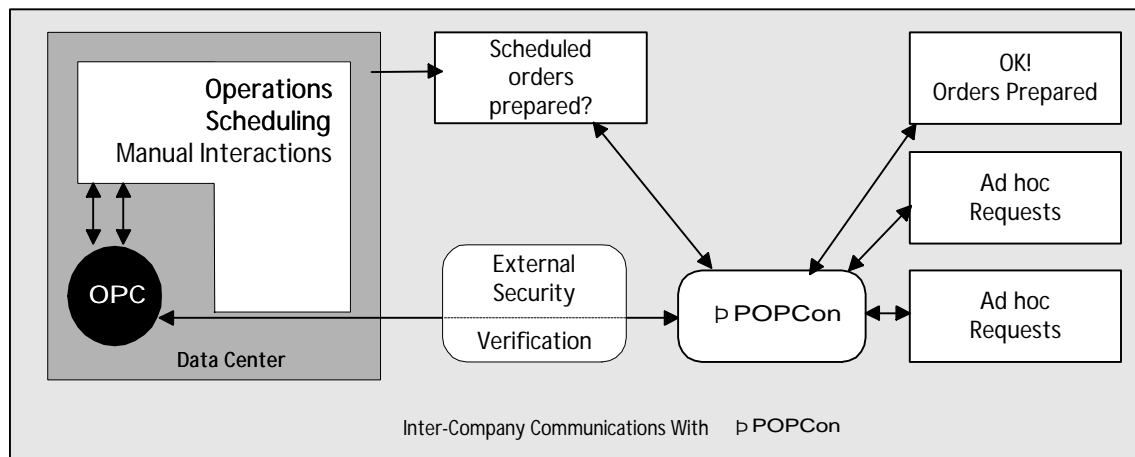
All these order requests are gathered by ▷POPCon and sent to OPC/ESA continuously, thereby ensuring a "just-in-time" transmission to OPC/ESA, if desired. ▷POPCon orders can be grouped for maintenance by different people. In this way, it is – for example – possible to manage department specific orders in the department itself.

The users can control the OPC/ESA status of their orders and they can correspond with the administrator using mail orders. The admini-

strator can monitor each action going on at the interface between ▷POPCon and OPC/ESA. He or she can always be informed about each order processed by ▷POPCon, the requesting users, and the success or failure of each action.

To prohibit unauthorized use of the OPC/ESA system, the interface between ▷POPCon and OPC/ESA optionally can be protected either by your MVS security system (e.g., RACF) or by ▷POPCon internal security definitions.

In summary, the user department uses ▷POPCon to pass orders directly to OPC/ESA and to control online the ▷POPCon and OPC/ESA status of the requested orders. On the other side, the data center uses ▷POPCon as a centralized "watch post" of all requests being introduced by the user departments, to control execution errors, and to correspond with the user departments if any type of problem occurs. If desired, orders may be transferred as applications to OPC/ESA with a delay, or "off-line". This is accomplished by controlling the ▷POPCon driver which is administered by the data center. ▷POPCon is a complement to the job scheduling system – which remains the sole instrument for production planning and processing.



Both end user departments and data centers benefit from using ▷POPCon.

Benefits for User Departments

Using ▷POPCon, the user departments benefit from the following advantages:

- Increased responsibility for requesting and managing orders in the user departments, thus keeping responsibility for orders where it belongs.
- Order processing becomes more transparent for the end users, who need no longer know details about data center operations; the OPC/ESA status of requested orders can be controlled by the end users themselves.
- Success of requested orders can be controlled by the end users themselves.
- Improved service for the preparation of control data and other order specific information that must be supplied by the end user to the job(s): scheduled orders needing control data will be displayed to the end users as soon as they are available in OPC/ESA; orders can be supplied with comments and special processing instructions; they can be requested in a way which ensures that they are started only after the work scheduling department in the data center has read, and possibly answered to, the comment.
- Time will be saved because double working operations and error prone communication ways are avoided; orders will be transmitted to OPC/ESA nearly as soon as they are entered into ▷POPCon; orders can be requested at any time of the day as long as the ▷POPCon driver is running, and they will also be entered into OPC/ESA as long as it is available.
- Requesting orders within ▷POPCon can go on, even if OPC/ESA is not available at request time; requested orders will be queued and transmitted to OPC/ESA as soon as it is available again. End users, therefore, are no longer concerned with such system problems in the data center.
- The ▷POPCon dialog is easy to learn and use because it is working with few and simple commands and the logic in each panel is similar.

▷POPCon End-Users have:

- Increased responsibility.
- No need to know about data center operations.
- Control over their order's success.
- Improved service.
- More time!
- No concern about job scheduler problems.
- A user-friendly online interface.

Benefits for the Data Center

From the data center's view, ▷POPCon offers these advantages:

- Time will be saved because manual preparation of jobs required for ad hoc orders is reduced or eliminated.
- Errors caused by traditional communication ways (e.g., order forms, which must be completed manually and transferred by an interoffice messenger) will be avoided.
- Improved data protection and data security since user control data is transferred completely into the data center environment at order request time.
- Increased efficiency of data center personnel: if, for example, OPC/ESA has broken down, the user departments can still request orders in ▷POPCon, thus the work scheduling department is not disturbed and can concentrate on their job when "worst comes to worst".
- Enhanced revision safety: all user requests can be logged for audit trail purposes; commentaries from the user departments cannot be modified subsequently, administrators may only edit their own comments; user defined reports about any information in ▷POPCon can be produced with batch utility commands.
- Effective security checking: the authority of users to request orders automatically will be checked either by the MVS security system (RACF) or on the basis of ▷POPCon internal security definitions; the authority to add an ad hoc order to OPC/ESA's current plan and one to insert user provided JCL for an order into OPC/ESA will be checked separately.
- The ▷POPCon system can be controlled very easily by using system commands in the ISPF dialog: using this control feature the interface between ▷POPCon and OPC/ESA, for example, can be stopped, logs and traces can be started, and the usually never-ending ▷POPCon driver job can be shut down regularly.
- Maintenance of the ▷POPCon system is flexible using the batch utility feature: using ▷POPCon utilities allows you, for example, to transfer a large amount of selected OPC/ESA applications automatically as orders into the ▷POPCon master data.

▷POPCon Data Centers have:

- More time.
- Fewer errors.
- Improved data protection and data security.
- Increased efficiency.
- Enhanced revision safety.
- Effective security checking.
- Easy control and maintenance of the ▷POPCon system.

▷POPCon means flexible and multi-purpose job ordering and management.

▷POPCon is designed to be a flexible multi-purpose job ordering and management system. Its main functions include receiving ad hoc orders and input data from the end-user, managing user authorizations for orders, and automatically forwarding orders to one or more OPC/ESA systems. All end-user functions are accomplished by easy-to-use ISPF dialog windows. Before detailing these features, let's review the normal job order planning and processing within the data center. First, two types of job order processing must be distinguished:

- Scheduled orders. These are jobs that are scheduled to process orders regularly on a fixed date and time. For scheduled orders, the data center requests the user to provide control and input data for the scheduled job that may vary from one processing to the next.
- Ad hoc orders. These are jobs to process ad hoc orders only after being explicitly requested by the user. With casual orders, the user must request the order and deliver any necessary data simultaneously with the order, normally in the form of a paper request.

A job scheduling system (e.g., OPC/ESA) is the main instrument for automated production planning and processing in the data center. All scheduled orders are automatically planned and started by the job scheduling system. Ad hoc orders interrupt the data center personnel for manual preparation of the order's schedule. Additionally, scheduled jobs to process scheduled orders are often interrupted due to the need for manually prepared input.

The automation of these order types in production planning and processing can be complex. Both require ongoing interaction between the user and the operations personnel. ▷POPCon is the link you need to complete the automation of these orders.

Automated Input of Data to Scheduled Orders

In many cases, scheduled orders require user prepared input to the job. Such input may be necessary to provide date sensitive information, member names, special file input, etc. Thus, an end-user's failure to provide this input may delay the processing of an application (i.e., OPC/ESA "STATUS WAIT").

▷POPCon will review the OPC/ESA current plan daily, on a recurring basis, for all scheduled orders. Using the ▷POPCon on-line interface, the user is prompted with a list of user specific orders scheduled for the day and is reminded of which orders require input. No longer will those periodically scheduled orders be forgotten! Not only is the user reminded of which orders require input, such input can be provided directly to ▷POPCon for automatic inclusion in the application. Naturally, all such orders and job dependent information is unique to the business being conducted by your company, department, etc. With ▷POPCon, your site-specific conditions and rules can easily be introduced.

Automated Request of Ad hoc Orders

With ▷POPCon, ad hoc orders, and any related data, can be requested directly by the user and transferred automatically to OPC/ESA. Proper controls insure the submission of only user authorized orders. Additionally, the user can provide processing instructions with the special order, e.g., the number of printed reports, a schedule change request, etc.

The data processing center can review the ad hoc requests and associated processing instructions as needed. ▷POPCon will automatically refresh their view on a recurring basis. Using ▷POPCon, the data center personnel can also communicate with the requester/user, e.g. the request is denied, delayed, requires more information, etc. All ad hoc requests and responses can be logged for audit trail purposes.

Use of OPC/ESA's Variable Substitution

▷POPCon utilizes the JCL variable substitution exit of OPC/ESA. The execution JCL can be set up using ▷POPCon variables (e.g. department abbreviations, userids). The values of these variables are maintained in ▷POPCon's ISPF dialog, and they will be substituted in the execution JCL by ▷POPCon's version of the substitution exit when the job starts running.

Continuous Monitoring and Status Control

The OPC/ESA status of the applications and the states of the corresponding operations can be watched in ▷POPCon's ISPF dialog. ▷POPCon continuously searches for its orders in OPC/ESA and updates the orders' status fields whenever a change occurs. There is no need to wonder "what ever happened to my order?".

Processing and Rejecting Orders

- Processed Orders.

Orders being transferred and simultaneously integrated in the current plan are exclusively monitored by the processing control of the job scheduling systems.

▷POPCon has no influence on the processing time. But the job scheduling system reports back when the job was processed successfully.

Provided that he/she has the authorization to do so, the user may display orders of this level within ▷POPCon. Thus, the user can find out which of his/her orders were successfully processed and when.

- Rejected Orders.

If an order, that is already transferred to ▷POPCon, should not be transferred to OPC/ESA (on user request or on rejection by the data center), or when an error occurs during order execution, orders are passed to this level. In both cases, the data center's production control has to take manual actions: select the order by an appropriate flag, complete it with a message, and label it as rejected order. On withdrawal of an order already transferred to OPC/ESA, the order has to be withdrawn from the current plan of the job scheduling system.

Provided that he/she has the authorization to do so, the user may display orders of this level within ▷POPCon. A specific flag signals to the user that there is a message ordinarily indicating why the order was rejected.

Security and Revision Features

For the users, ▷POPCon is the central instrument to inform the data center of order requests and specific processing requirements. Its exposed position makes heavy demands on the data protection and security. ▷POPCon meets these demands by

- ▷POPCon internal access control
- MVS external security product, e.g. RACF
- complete and continuous logging.

▷POPCon provides a flexible and powerful authorization system. It is contents-oriented, i.e. the user rights are linked to the several orders and differentiated between placing orders and displaying placed orders. This access mechanism applies to all levels of order processing likewise.

It allows you to specify in detail which orders may be administered, requested, or just viewed by which user. For each order, the ability to insert JCL when requesting an order can be protected separately.

If you choose RACF protection for your ▷POPCon system you optionally can use the OPC/ESA security definitions or set up ▷POPCon specific security definitions in your MVS system.

The ▷POPCon's security feature is important for protecting your OPC/ESA systems which with ▷POPCon may be used by new groups of users.

Whereas access control protects the day-to-day work with ▷POPCon, logging enables a continuous revision of this work. The logging facility is part of the continuously running ▷POPCon driver jobs. For each order requested through ▷POPCon, a log entry is generated which informs the administrator about details of this request (user ID, order name, ...) and whether the request was denied by the security feature. In addition, each system request controlling the ▷POPCon driver itself is logged. This allows for a complete and clear revision of all actions going on within ▷POPCon

Because all scheduled and requested ad-hoc orders are stored in a VSAM file of the ▷POPCon database, it is also possible to generate reports containing all desired order request information (e.g., request/completion times, requesting users, data sets, ...) for a selected time interval. The part of ▷POPCon's database containing the order requests can be archived using a flexible utility, thereby allowing revision reports for "long-ago" ▷POPCon work. Additionally, archived request data may be restored to be used again with the running ▷POPCon system.

How does the ▷POPCon system work?

From an end-user perspective, all functions are performed using ▷POPCon's ISPF dialog. This dialog consists of:

- CUA working and help panels.
- REXX execution procedures.
- ISPF messages.

In addition to using the ISPF dialog, system administrators will find ▷POPCon maintenance tasks are made easy using its command-driven batch utilities. These tasks include:

- Producing user defined reports based on order requests and master data.
- Transferring applications from OPC/ESA as orders to ▷POPCon.
- Checking the consistency between OPC/ESA and ▷POPCon data.
- Transferring security information from the MVS security system to ▷POPCon.
- Checking the consistency between the MVS security system and ▷POPCon data.

▷POPCon as an instrument to automate company communications between user departments and the work scheduling department can be best technically understood by looking at its internal communication structure. All communication in ▷POPCon is managed through the use of a common VSAM database and file handler. The database consists of three VSAM files for the following types of data:

- System control data (transaction control file, TCF).
- Order and user master data (application control file, ACF).
- Order request queue data (transaction request file, TRF).

Even if you want to use ▷POPCon for different OPC/ESA systems there will be only one set of ▷POPCon files.

Communication between end-users and ▷POPCon

End-users work with ▷POPCon through a TSO/ISPF dialog. This dialog is available whenever TSO is available and when ▷POPCon's database (VSAM files) is not exclusively used by maintenance tasks (e.g., REORG). The end-users can use the dialog on any MVS system which can access the respective ▷POPCon VSAM files.

All requests and actions executed within the ISPF dialog will be gathered in ▷POPCon's VSAM files. The difference between maintenance actions and order requests is that the first will work on the master data files, while all order requests will be put into a queue file – which is processed by the "first-in-first-out" (FIFO) principle.

▷POPCon users with administrator authority may also communicate system command requests, which technically are processed similar to regular order requests.

Communication between ▷POPCon and OPC/ESA

▷POPCon communicates with OPC/ESA through the so-called ▷POPCon drivers. They are using the regular OPC/ESA program interface (PIF) to communicate with OPC/ESA.

The ▷POPCon driver is a continuously running job which communicates the information about requested orders between a specific OPC system and the ▷POPCon VSAM database. Information exchange between ▷POPCon and OPC is done on the basis of a user defined time interval, which per default is 15 seconds. Once started, driver execution will never end unless it is regularly shutdown by the ▷POPCon administrator with a shutdown command issued via the ISPF interface or by a utility command. In the same manner, driver execution may be paused and restarted without completing the job itself.

All error and logging messages will have a time stamp to provide a readable driver log for long running drivers. There may be several drivers all serving the same OPC system, which may be desired for large systems to ensure that requested ▷POPCon orders are transmitted to OPC as soon as possible and that status information from OPC are returned to the ▷POPCon user immediately.

The information flow between ▷POPCon and OPC processed by the driver concerns:

- Adding adhoc orders requested by the end-user as applications to the current plan of OPC.
- Providing scheduled orders to the end-user based on the application information searched and interpreted in OPC.
- Inserting JCL prepared by the user into OPC for scheduled and adhoc orders.
- Checking OPC's application and operation status for all orders requested by a ▷POPCon end-user.

Due to the restrictions of OPC/ESA's program interface facilities, you must run the ▷POPCon driver job on the system where the intended target OPC system resides.

Communication between end-users and administrators

The common ▷POPCon database enables the system to be used for information exchange between ▷POPCon users in the user departments and the administrators in the work scheduling department. All necessary additional information concerning execution and control of specific order requests can be forwarded in this way. The respective "messages" are a specific request type in ▷POPCon, contained in the global queue file. This enables the ▷POPCon user to utilize this feature in the same way as any order request.

Installation and operation is fast and easy.

To install and operate ▷POPCon, simply perform the following steps:

- Download the delivered libraries.
- Allocate the VSAM files.
- Set up the system control information with ▷POPCon's INITSYSTEM and INITPOPCon utilities.
- Define security resources and user access values in the MVS security system (optional).
- Set up the ▷POPCon master data by running the utilities ADDORDER and ADDUSER.
- Customize the REXX procedures of the ISPF dialog to fit your installation's requirements.
- Customize the REXX order procedure to be used for the installation specific order processing within the ISPF dialog.
- Do some order specific maintenance of the order master data ISPF dialog (e.g. assign variable values, assign data set names).
- Determine startup parameters to be used for the ▷POPCon driver.
- Start the driver job(s).
- Execute the ISPF dialog wherever desired.
- Execute ▷POPCon's CHECKORDER and CHECKUSER utility whenever there are changes in your OPC/ESA application definitions or in the MVS security system definitions.
- In case of errors: check the driver log, issue trace commands to the driver through the ISPF dialog, check trace messages.

About SE...

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