



Powerpage/400 Product Information

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Preface

This document contains a general discussion of Powerpage/400 and its application at iSeries / AS/400 sites. A detailed User Guide is currently being converted from its existing WinHelp format to Adobe PDF format and will be available in January 2002

All Powerpage/400 displays contain full screen and context sensitive Help available by pressing F1 or Help.

Cosyn products

Powerpage/400 works with and is complemented by our other products. These include:

Audit Trail/400 — Dynamic, Application Independent Audit Tracking of DB2 UDB/400 Field Level Changes

Spool Manager/400 — Spool Automation for IBM AS/400 and iSeries

BCD Products — Award winning products from BCD Software including ProGen WebSmart, Catapult and EZ-Pickin's

You can find more information about these automation solutions on our [website](#).

What is Powerpage/400?

In summary Powerpage is a comprehensive and flexible set of tools that enables AS/400 workstation users, application programs and the OS/400 operating system to communicate with internal and external personnel via paging services and digital cellular SMS (short message service) to cellular phones.

We originally developed Powerpage/400 in response to a request from one of our clients, a large manufacturing and distribution company, to be able to use AS/400 workstations to page personnel and further to automatically page duty systems staff should an AS/400 application or operating system problem occur while the site was fully or partially unattended.

The system is built around three major components:

- Paging & SMS
- Duty roster staff database
- System monitoring

These components interact to provide a way of contacting users on an 'as required' basis from workstations or applications and to automatically alert on call systems staff to problems requiring resolution on the AS/400

The problem

Powerpage/400 is a 'missing link' wireless communications and operations automation management solution for AS/400 / iSeries installations. It addresses the following common problems and requirements.

- AS/400 I/T staff tend to spend several hours every week performing repetitive message management tasks on the systems operator queue. These tasks might include regularly checking the queue for messages, replying to messages, contacting programming staff to resolve problems, and escalating unresolved problems. This open-ended cycle repeats itself regularly; staff tend to become demoralized and have less time for more important activities.
- When the site is unattended, operators often have to sign-on from home unnecessarily 'just in case' there is a message waiting to be answered on QSYSOPR message queue.
- Service levels are lower than they could be due to the potential time lag between the message arriving and duty operators seeing it. When an inquiry message halts an overnight processing job all the jobs on a single-streaming job queue behind it don't run. This costs precious processing hours running the backlog the following morning.
- There are often so many messages on the operator message queue that it becomes easy to miss critical events.
- Dispatching work orders or other key information to remote personnel are often secondary tasks disconnected from the actual process of logging a call. Powerpage/400 provides an easy interface to dispatch calls automatically from within your existing applications.

The solution

Powerpage/400 provides I/T personnel with the means to automatically monitor the QSYSOPR (and other) message queues. Powerpage/400 can automatically reply to messages or trigger secondary processes on receipt of messages. Unlimited levels of escalation and a flexible duty rostering are built-in.

Powerpage/400 provides quick and complete external control of all message monitoring activity. It eliminates the need to manually manage routine message queue traffic yet contacts you immediately a problem arises.

Powerpage/400 provides a full command set to allow wireless communications to be integrated into your ERP applications, as well as providing ad hoc user paging/SMS

Since all message handling is centralized within the Powerpage/400 message action database you no longer have to maintain user or workstation job message settings, or use the system reply list on some jobs and not others.

We wanted to create tools that could be easily embedded within operational procedures like the IPL startup program and end-of-day runs, and also within the OS/400 scheduler. To that end we implemented a simple full-function command interface to access all Powerpage/400 functions.

The final result was Powerpage/400. We installed the first version in 1993 and it has been bringing major benefits to increasing numbers of iSeries / AS/400 sites every day since then. We sincerely hope it will do the same for you.

How it's used

After setting up your paging/SMS service configurations, defining the phones and pagers associated with them and setting up a default duty roster Powerpage/400 is ready to go.

Typically in a busy iSeries / AS/400 shop the Powerpage/400 page server and message queue monitor processes are started at IPL and run continuously in the background.

Applications and OS/400 send messages to the monitored message queues, usually QSYSOPR. As messages arrive Powerpage/400 searches through its database for your instructions on what actions to perform on the message, performs the specified activities including sending pages and SMS messages, and writes to a log file for diagnostic purposes.

The default handling sequence ensures that inquiry messages (i.e. those requiring a reply) trigger the system default escalation sequence. Information messages do not get paged by default. You can override the defaults for inquiry (escalate) and information (no escalation); for those exceptions to the general rule you set up explicit message handling action entries.

Using SMS & paging

After installing the package and starting the page server any AS/400 workstation or application becomes 'page capable'. Here are some ideas to maximize the advantages afforded by centralized paging.



Set up managers and other staff with SMS-capable cell phones or pagers to improve intra- and inter-company communications.



Equip systems staff with pagers and implement system monitoring and duty rosters. Ensure duty systems staff can sign-on to the AS/400 from home should a problem occur after hours.



Equip field personnel, reps, equipment service technicians etc. with pagers. Running in 'silent mode' pagers are less obtrusive than cellular phones and pages can be stored and dealt with when convenient. Some pagers can be attached to portable printers and messages printed.



Set up an 0800 'free phone' service number for your customers. Your operators can use paging to distribute service calls. Advantages include centralized reporting, standardization and centralization of services.



Placing a workstation at the reception desk allows staff to be contacted wherever they are on- or off-site in response to phone calls or visitors.



Request that external personnel key to the functioning of the business carry pagers and set them up in the staff database for fast call out.



Integrate paging into your local procedures. Possibilities include:

- Page systems staff if unattended backup procedures cannot complete. Include paging commands in standard program error handling routines and power supply UPS shutdown routine.
- Page executives when business key indicators change for the worse or better.
- Page managers when stocking levels, sales, or other key operational parameters reach set values.
- Page sales reps re. stock availability, promotions, new products and pricing.
- Automatically page mobile technicians, operators and sales reps with work orders and sales information by adding a 'backend' paging process from an existing application.

Features

Paging & SMS

- Page staff from a workstation list
- Page staff codes via PGESTF command
- Page lists of numbers
- Keyword paging of duty, default, admin, helpdesk, supervisor and alert staff
- Group paging
- Delayed paging
- Automatic formatting of long messages
- Pager hardware management
- History and statistics inquiry and reports
- Supports PET/TAP/IXO protocols plus several proprietary ones
- Supports multiple networks and handles switching between them transparently
- Supports messaging to digital cellular SMS cell phones, alpha, numeric and tone pagers
- Detailed and high level logging of pages, communications etc

Duty roster, staff database

- Multi company
- Default duty rosters of on call staff
- Copybook rosters
- Custom rosters by week
- One week at a glance maintenance screens
- Control of user access to staff and other functions
- Define default, duty, admin, helpdesk, supervisor and alert staff for companies and departments for keyword paging

System monitoring

- Monitor any message queue and initiate pre-defined responses or default handling
- High level control of monitor start and stop
- Escalation: If a problem is unresolved after a specified time frame, go to unlimited tiers of activity
- Full history logging with search facility

- Monitor subsystem activity

General

- Help module features context sensitive and full screen help. Comprehensive online manuals with hypertext.
- Programs are highly efficient, 'event driven' and require minimum system resources. Files are purged automatically and require no additional housekeeping.

Staff database structure

Powerpage/400 uses a hierarchical database structure to organize staff within departments within companies. Duty rosters can be defined for each department and the rostered operator can be easily paged using the *DUTSTF keyword, for example:

*PGESTF STAFF(*DUTSTF) MSG('This command will page the duty rostered staff code')*

Level	PGESTF STAFF() & keywords	Description
SYSTEM, single entry [diagram: single box]	Default *ALRSTF, *ADMSTF, *HLPSTF, *SUPSTF	Top level defaults for PGESTF keyword paging
COMPANIES, multiple companies [diagram: two boxes]	Company level defaults for *ALRSTF, *ADMSTF, *HLPSTF, *SUPSTF	Company settings for keyword paging
DEPARTMENTS, multiple departments within companies [diagram: four boxes]	Duty roster, default rosters. Department level defaults for *ALRSTF, *ADMSTF, *HLPSTF, *SUPSTF	Duty rosters at this level Department settings for keyword paging
STAFF_CODES within departments	Explicit staff code paging	Can page staff explicitly

Figure 2. Staff database structure. Keywords used with the PGESTF command can access staff codes assigned to each level.

Page server and hardware database structure

'Page servers' are the definitions for the wireless networks you wish to use. Grouped under these are the hardware entries (phones, pagers) that are associated with the service. Powerpage/400 switches dynamically (and transparently) between network providers.

Level	Description
SYSTEM, single entry [diagram: single box]	Defaults for servers & hardware
SERVERS, multiple service providers [diagram: two boxes]	Comms, protocol, hardware defaults
HARDWARE, pager hardware associated with service providers	Pager dial numbers, formatting etc

Figure 3. Page server database structure

Powerpage/400 Version 5

Powerpage/400 Version 5 is being finalized at the time of writing. Development is complete and testing is well underway. Planned release date is January 2002.

We have extended functionality to include the following:

Email support

You can now elect to send messages via email. Since the telecommunication companies are implementing email gateways to SMS and paging services this feature can be used to eliminate the need for dedicated X.25 or modem connections. Our implementation optionally bypasses complex SNADS directory setup and uses our own SMTP API

Web Interface

For sites running an HTTP web server on the iSeries / AS/400, access to entries in the Powerpage database is now available via a browser display. 'Green screen' administration functions are provided to control web user access to staff codes and list views.

'Master users' can add new entries to the Powerpage database and view logs via their browser. Limited users can send messages to allowed sets of phone, email and pager targets.

Web pages are fully customizable to allow you to include your company logo and color scheme. You can also set up and display 'soft' links to corporate or other web sites and local email support addresses.

Easier database setup

New staff codes and their associated device hardware entries can now be set up in a single step using the staff 'wizard'.

All new user guide

Cosyn has standardized all product user manuals to Adobe Acrobat PDF format. The new Powerpage/400 manual has been extensively re-worked and all new features fully documented.

Contact

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