ServerPac and CBPDO Internet delivery

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e business on demand software

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ServerPac continues to provide enhancements to allow you to perform your system installs easier and quicker. This session describes how to order your ServerPac or CBPDO with ShopzSeries so you can get it delivered over the Internet, and receive it into the ServerPac Dialog or use the SMP/E RECEIVE FROMNETWORK command for CBPDO installation.

Agenda

- Internet delivery benefits
- Download methods
- Software and hardware requirements
- Security considerations
- Download considerations
- The “Big” Picture - ServerPac
- ServerPac dialog for Internet orders
- The “Big” picture – CBPDO
- SMP/E RECEIVE FROMNETWORK

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Internet Delivery has been available for CBPDO since October, 2002 and for ServerPac since January, 2005. There are many benefits when you choose to obtain your ServerPac or CBPDO this way rather than using physical tapes. There are several hardware and software requirements and download considerations when choosing Internet Delivery.

There are two download methods, directly to your z/OS host system or to your workstation then upload to your z/OS host system, to allow you to choose the best method for your environment. The ServerPac Dialog has been enhanced for Internet Delivery so you can now receive your order from physical tape, a network server, or your local file system. The RECEIVE job uses SMP/E’s GIMGTPKG utility to download your ServerPac order directly to your z/OS host system. For CBPDO, SMP/E’s RECEIVE FROMNETWORK command is used to download your order directly to your z/OS host system. Download Director is used to download ServerPac or CBPDO order to your workstation then you will need to upload it to your z/OS host system.

Internet delivery benefits

- Internet delivery affords you advantages in the areas of:
  - Improved automation with tape elimination
    - No tapes to check-in, store, manage, or mount
    - Eliminates handling upwards of 60 tapes for physical delivery of a ServerPac or large CBPDO order
    - Saves time and reduces cost
  - Improved software delivery
    - Faster manufacturing turnaround time
    - Avoids physical shipping/handling delays
    - No reorders due to bad tapes

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There are several advantages to using Internet Delivery to obtain your ServerPac or CBPDO order. The main advantage is the capability of improved automation due to reduced tape handling. As you probably know, ServerPac orders are large and can reside on more than 60 tapes depending on the tape media you choose. CBPDO orders can also be large depending on the amount of service delivered with your order. The elimination of all these tapes can provide cost savings due to elimination of tape handling – no more tape mounts! And….you will not have to reorder because of bad tapes which further delays the installation of your order.

The elimination of tape creation during the manufacturing of your order improves the turnaround time since tapes no longer need to be obtained, mounted, labeled, and written. The shipping and handling of the physical media is also eliminated which further improves the turnaround time for your order to be available to you.

Internet delivery options

You can order and download all of these System z® software packages through ShopzSeries		
z/OS®	z/VM®	z/VSE®
ServerPac and CBPDO CustomPac Fee Offerings Maintenance	VM-SDO	VSE-SIPO

- Web Deliverables are not in ShopzSeries but are available from the z/OS Downloads page
- SMP/E 3.4 provides the Internet Service Retrieval function that allows you to automate service orders with the SMP/E RECEIVE ORDER command
  - Requires a certificate obtained from ShopzSeries

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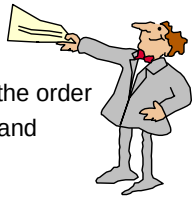
In order to use the Internet Delivery option, you must place your order using ShopzSeries. If you are not already a ShopzSeries user, you must first register for ShopzSeries. When you place your order in ShopzSeries, you will be able to select "Internet" as one of the Preferred Media options. ShopzSeries provides Internet delivery for ServerPac, CBPDO, and the CustomPac Fee Offerings such as SystemPac®, ProductPac®, and RefreshPac. ShopzSeries also provides Internet delivery for z/VMs SDO and z/VSEs SIPO offerings.

You can use ShopzSeries to order maintenance as well, however SMP/E V3.4 introduced Internet Service Retrieval that allows you to obtain maintenance automatically using the RECEIVE ORDER command. SMP/E's Internet Service Retrieval requires a certificate which must be obtained from ShopzSeries. Refer to *IBM SMP/E for z/OS User's Guide* for more information.

z/OS can provide new function between z/OS releases through the maintenance stream or as Web deliverables. z/OS Web deliverables are only delivered through the Internet but are not found in ShopzSeries. They are only available on the z/OS Downloads Web page.

Download methods

- Two download methods
  - Direct to Host
    - Uses the ServerPac Dialog "Server" option using IBM Server which generates a RECEIVE job that uses SMP/E GIMGTPKG utility
    - Uses the CBPDO RFNJOB job supplied on the download page that uses SMP/E RECEIVE FROMNETWORK command
  - Store and Forward
    - Uses Download Director to workstation
    - Workstation to Host Option 1
      - Use the ServerPac Dialog "Server" option using workstation as FTP Server
      - Use the SMP/E RECEIVE FROMNETWORK command using workstation as FTP Server for CBPDO
    - Workstation to Host Option 2
      - Upload to Filesystem on Host using your chosen method
      - Then use ServerPac Dialog "Filesystem" option to RECEIVE the order
      - Or for CBPDO, then use SMP/E RECEIVE FROMNTS command



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There are two download methods you can choose for z/OS product Internet orders:

1.Direct to Host

•For ServerPac, this method uses the new "Server" Dialog option which generates a RECEIVE job that uses the SMP/E GIMGTPKG utility to download your order from the IBM server to your z/OS host system's Download Filesystem.

•For CBPDO, this method uses the supplied RFNJOB job that uses SMP/E's RECEIVE FROMNETWORK command to download your order to your z/OS host system's Download Filesystem as specified with the SMPNTS DD statement.

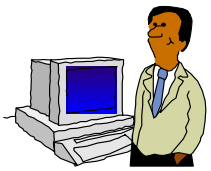
2.Store and Forward

•This method uses Download Director to download your order from the IBM server to your workstation. Once your order is on your workstation, there are two options you can use to upload your order to your z/OS host system.

1.The first option allows you "download" your order to your host system using your workstation as the FTP server. For ServerPac, you can the "Server" Dialog option which uses the new SMP/E GIMGTPKG utility to upload your order into your z/OS host system's Download Filesystem using your workstation as the FTP server. For CBPDO, you can use the SMP/E RECEIVE FROMNETWORK command using your workstation as the FTP server.

2.The second option allows you to upload your order to your z/OS host system's Download Filesystem using any method you choose. Then for ServerPac, you use the "Filesystem" Dialog option to RECEIVE your order directly from the Download Filesystem, or for CBPDO you use the SMP/E RECEIVE FROMNTS command.

Software requirements



- Software requirements for all ServerPac/CBPDO orders:
  - In *z/OS Planning for Installation,* GA22-7504
- Software requirements for downloading ServerPac/CBPDO orders:
  - **Host**
    - Supported level of z/OS (includes SMP/E)
      - NOTE: z/OS V1.7 goes out of service 09/30/2008
    - ICSF enabled for data integrity using SHA-1 hash checking
      - Preferred for performance reasons

    -or-
    - Java 2 Technology Edition V1R4 for using SMP/E Java class for SHA-1 hash checking as an alternative to ICSF
    - ServerPac Dialog level 17.00.00 (z/OS R6 level) or higher
    - Firewall configuration for identifying commands in RFNJOB for CBPDO or ServerPac Dialog RECEIVE to allow downloading using FTP through your firewall
  - **Workstation**
    - Capable of using Download Director (Java, Browser levels)
      - Details available in Help on ShopzSeries Web site
    - Accessible to z/OS host system for uploading your order
    - CD write capability to process CD images associated with your order

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As always, the software requirements for ServerPac and CBPDO are documented in *z/OS Planning for Installation*. There are some additional requirements for downloading a ServerPac order.

A supported level of z/OS is required. This includes SMP/E which provides the RECEIVE FROMNETWORK and RECEIVE ORDER commands, and the GIMZIP, GIMUNZIP, and GIMGTPKG utilities used for Internet delivery.

You should enable ICSF since SMP/E uses ICSF's SHA-1 hashing algorithm to compare the hash value generated at IBM with the one generated on your system and assure that what you got is what was sent to you. If ICSF is available, SMP/E will use it since it has better performance, but if ICSF is not found, SMP/E will use Java classes to calculate SHA-1 hash values. This alternative requires Java 2 Technology Edition V1.4 or higher.

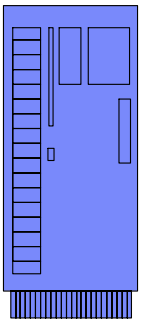
You need to understand how to navigate your firewall to successfully download your order. If required, you will need to provide firewall commands when generating the ServerPac RECEIVE job or updating the CBPDO RFNJOB job.

If you intend to use the Store-and-Forward download method, your workstation must be capable of using Download Director. Download Director requires a Browser and uses a Java applet. The specific requirements can be found at this Web site: ***http://inetsd01.boulder.ibm.com/dldirector/faq.html***.

Your workstation will require connectivity to your z/OS host system so you can upload your order. You can upload your order using any method such as FTP. One option is to use SMB to network-attach your z/OS download file system and point Download Director to that network drive. Be sure SMB is configured for binary downloads.

Your workstation may also need CD write capability. There may be CD images associated with your order. These CD images are in ISO9660 format and are shipped as .zip files. You may need to re-create the CDs for these images.

Hardware requirements



- Hardware requirements for downloading ServerPac/CBPDO orders:
  - If using ICSF, you must enable cryptographic support on your processor.
    - Remember, you can use Java 2 Technology Edition V1R4 or higher for using the SMP/E Java class as an alternative to ICSF
  - Enough DASD space in your file system to accommodate at least twice the compressed size of your order to download and process it (about 7GB compressed for a z/OS order)
  - Enough workstation hard drive space to download the order if you use store-and-forward (about 6.5GB for a z/OS order)
    - Not needed if using SMB to network-attach your z/OS file system
  - And of course enough DASD space for the new target system or the new product libraries.

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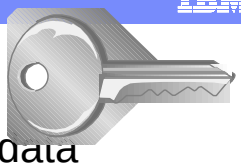
The ICSF component of the Cryptographic Services element of z/OS can optionally be set up to download a ServerPac or CBPDO order directly to your z/OS host system. SMP/E uses ICSF's SHA-1 hashing to verify that the downloaded files are intact when you get them. ICSF, in turn, requires that cryptographic support be enabled on your processor. Refer to the *z/OS Planning for Installation* book for further information.

Note: ICSF is *not* required since SMP/E will use its Java class if ICSF is not found; however, ICSF is the preferred method for performance reasons.

You also need enough DASD space to download and process the order. The data is temporarily stored in a file system. A typical z/OS ServerPac order is about 7GB compressed, therefore the Download file system will likely reside on multiple DASD volumes which requires it to be SMS-managed. In addition to enough space to accommodate the package download, you will need enough space to uncompress it. You should have enough space for your download file system to accommodate twice the size of your order to download the package and assure sufficient work space.

If you will download to an intermediate server or workstation (which may be configured as an FTP server), then you will need enough hard drive space to contain the package. No work space will be needed on the hard drive; you only need the space required to download the package itself since it will not be uncompressed until it resides on the host system. If you are using SMB to network-attach your z/OS download file system this workstation space is not needed.

Security considerations



- ICSF enabled or SMP/E Java class for data integrity on your driving system
  - SHA-1 hashing algorithm used
- Must logon to ShopzSeries using same user ID and password that placed the order to access download page
- Order on IBM Server expires in 14 days
- Restriction:
  - IBM Server does not accept secure FTP connections

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You might be wondering about security aspects of Internet delivery.

ICSF or SMP/E Java class is used for the SHA-1 hashing algorithm that ensures data integrity of the downloaded order. For ICSF to be used, your hardware crypto processor must also be configured. SMP/E will use its Java class if ICSF is not found.

To access your software order, you must logon to ShopzSeries using the same user ID and password that you used to place the order. This allows you to view only the orders you placed. The download pages are dynamically built when you select the order that is in "Download" status.

Your order will remain on the IBM Server for 14 days. Your "order ready" e-mail and the ShopzSeries download page will contain the order expiration date.

Restriction: At this time, the IBM Server does not accept secure FTP connections.

Download considerations

- How long does it take to download a ServerPac CBPDO order?
  - Depends on order content which determines size
  - Depends on type of connectivity

- Preliminary tests of z/OS ServerPac showed
  - LARGE order – 18GB compressed – ~11 hrs (Token Ring with lots of traffic)
  - MEDIUM order - 12GB compressed – ~4 hrs (Ethernet)
  - SMALLER order – 10GB compressed - ~3.5 hrs (Ethernet)
- Orders are not a single, large download package. They consist of separate files (archives) and the download is restartable at the failing file.

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So you are probably wondering how long it will take to download a ServerPac or large CBPDO order. Well, it depends…

Several factors contribute to the length of time it will take to download your order.

1.First, it depends on the size of your order which is determined by the content (which products are contained in your order). Of course, the larger the order, the longer it takes to download.

2.Another factor is the type of connectivity you use. Hopefully you will not have to use a modem (not recommended). Preliminary testing done within the IBM intranet showed that a Token Ring connection is slower than an Ethernet connection.

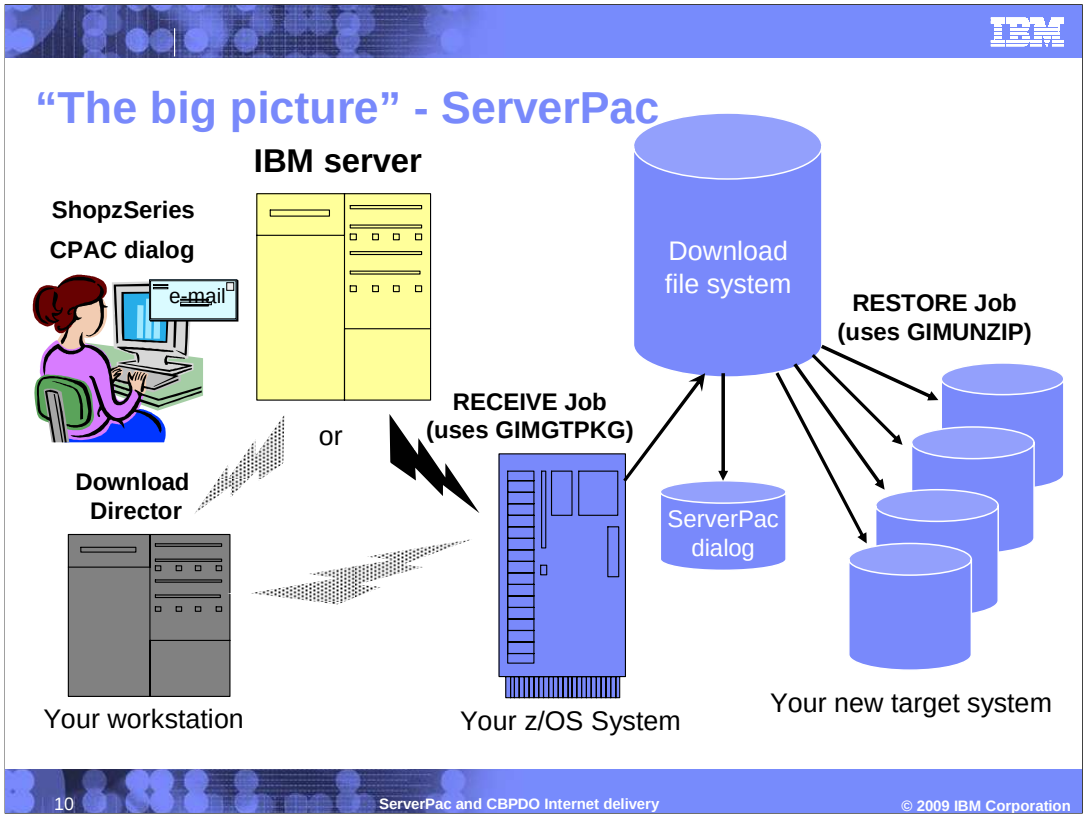
Download times from preliminary tests of z/OS ServerPacs (intranet) showed:

•For a large order (18GB compressed), it took about 18 hours using a Token Ring connection that had a lot of traffic.

•For a medium order (12GB compressed), it took about four hours using an Ethernet connection.

•For a smaller order (10GB compressed), it took about 3.5 hours using an Ethernet connection.

You do not download your order as a single entity. An order consists of GIMZIP archives (one per data set). The download is restartable at the failing file. In ServerPac there may be large files, such as the SMPPTS, therefore you should set your timeout parameters accordingly.



Here is the high-level overview of Internet delivery for ServerPac.

When you logon to ShopzSeries to access your order, the download pages are dynamically built. You can either download your order directly to host or download it to your workstation first and then upload it to the host.

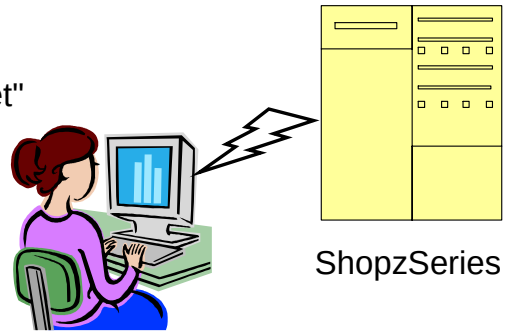
The Dialog "Server" option will generate a RECEIVE job that will use the new SMP/E GIMGTPKG utility to retrieve your order from the IBM server. GIMGTPKG will place the data in your Download file system system data set. Later, the Dialog RESTORE job will use the SMP/E GIMUNZIP program to load your new system's volumes from the Download file system.

When you have finished, you can delete the Download file system. However, you should consider dumping it first, just in case.

Downloading with Direct to Host (1 of 4)

Step 1: Order a ServerPac using ShopzSeries and specify "Internet" in Preferred Media selection

Step 2: Get the order confirmation e-mail



Step 3: Get the “order ready for download” e-mail
You must download your order within 14 days

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All ordering for Internet delivery of ServerPac is done using the ShopzSeries Web site, at: *https://www14.software.ibm.com/webapp/ShopzSeries/ShopzSeries.jsp*

Once you make your product selections, place your order using "Internet" as your Preferred Media option. You should receive an order confirmation within a few hours. After that, you will have to wait for the order to be built by IBM and placed on the IBM server.

Depending on what you order, this might take several days (up to seven business days). Once the order is ready to be downloaded, you will get another e-mail note saying that it is ready. This second note will contain a link to the download page you need to use to get information you need to proceed with the next step.

Note: Your order remains on the IBM Server for 14 days before it expires.

Downloading with Direct to Host (2 of 4)

Step 4: Go to the download page using the link in the "order ready for download" note.

Step 5: Get the FTP server name, FTP user ID and password, source directory, package hash value, order number, and order size (in MB) from the download page.

ShopzSeries Download Page

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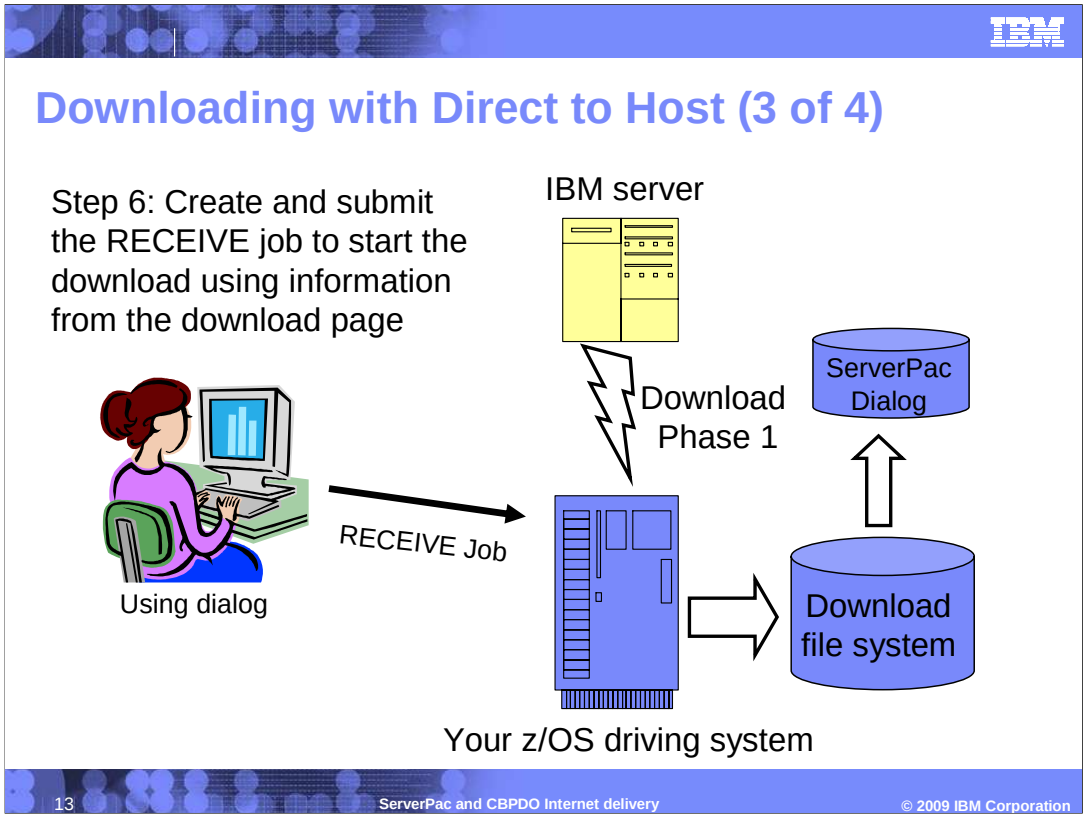
To get to the download page for your order, you can either use the link from your "order ready" e-mail or log on to ShopzSeries and select your order which you will see is in "download" status. This brings you to the download page. It will contain information you need to download your order, including:

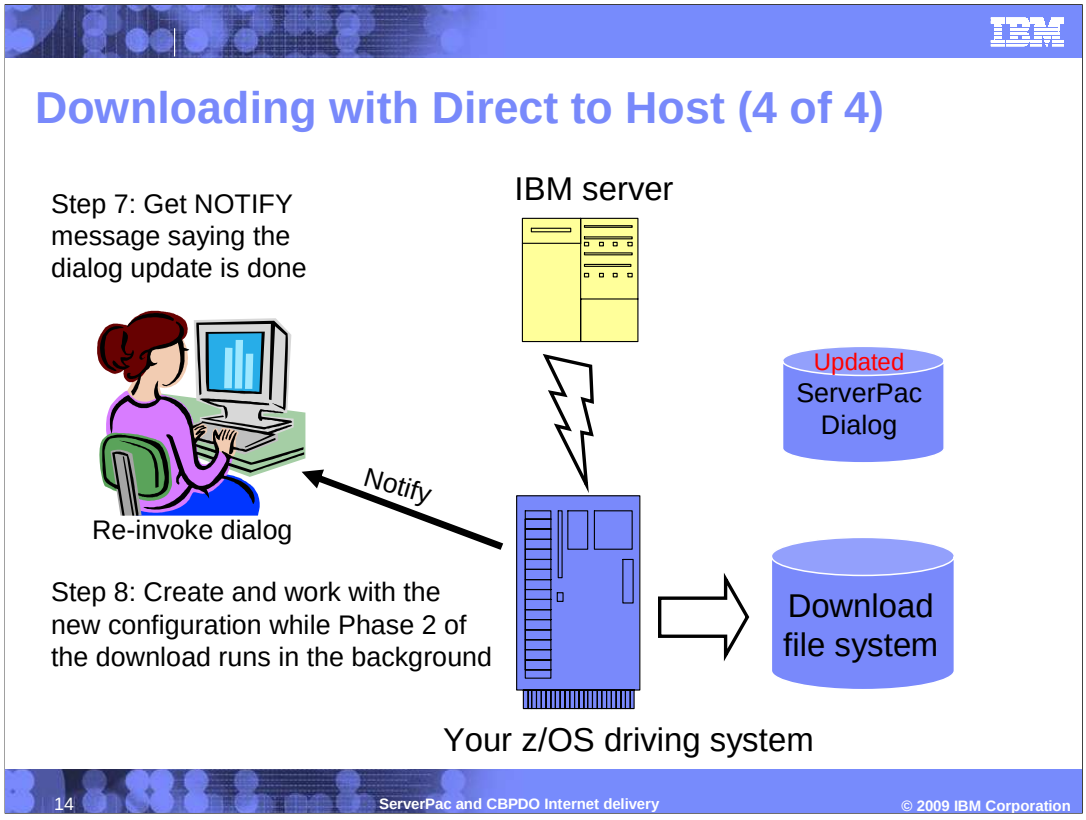
- The order size
- The order number
- The FTP server name
- The source directory
- The FTP user ID you need to download the order
- The FTP password you need to download the order
- The hash value that will be used to check what you download to make sure it is what was sent.

Record these things for use in the installation dialog (using copy and paste to save them in a file is recommended!).



Using the ServerPac installation dialog, use the "Server" option to generate the RECEIVE job for the order using the information from the download page. When the job starts, it will begin Phase 1 of the download. Phase 1 will download the information about your order and updates for the installation dialog. Once Phase 1 has finished, the dialog will have been updated and the order will appear, and be selectable, in the dialog.

Remember that you must exit the Dialog once you submit the generated RECEIVE job.



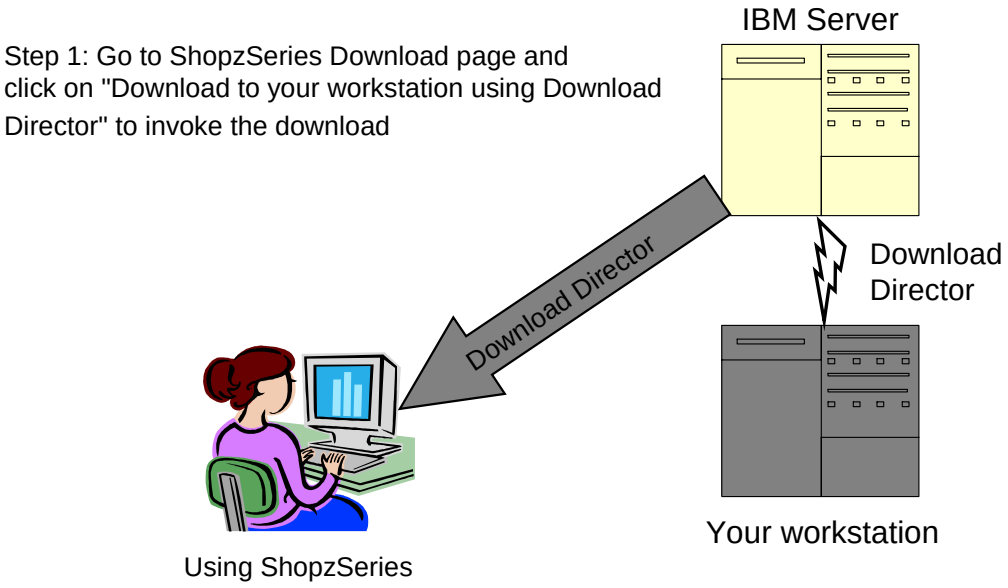
For “reasonable” connection speeds, Phase 1 should finish fairly quickly. The files in Phase 1 total about 30MB before compression.

The RECEIVE job will send a NOTIFY message to the submitter’s TSO/E user ID when Phase 1 has finished and then you can re-invoke the Dialog. Your order will show up in the order list, and you will be able to select it for installation. You need to have INTERCOM set in your TSO/E profile to get the message. To set it, issue this command from ISPF Option 6 or the TSO/E Ready prompt: **PROFILE INTERCOM** To turn it back off, issue: **PROFILE NOINTERCOM**

Once Phase 1 has finished, you can begin to use the dialog to configure the order. Phase 2 of the download will proceed in the background to get the remainder of the data for your order and place it in the Download File System. You can begin to work with the order while Phase 2 completes, up to the point where you are ready to generate the installation jobs. However, the installation jobs option is not enabled in the dialog until Phase 2 has finished. Since Phase 2 downloads most of the data (about 5-6GB compressed), it is likely to take considerably longer than Phase 1 to complete.

Once the RECEIVE job has finished and the Installation option has been enabled in the dialog, you can finish installing the order.

Downloading with Store-and-Forward (Step 1)



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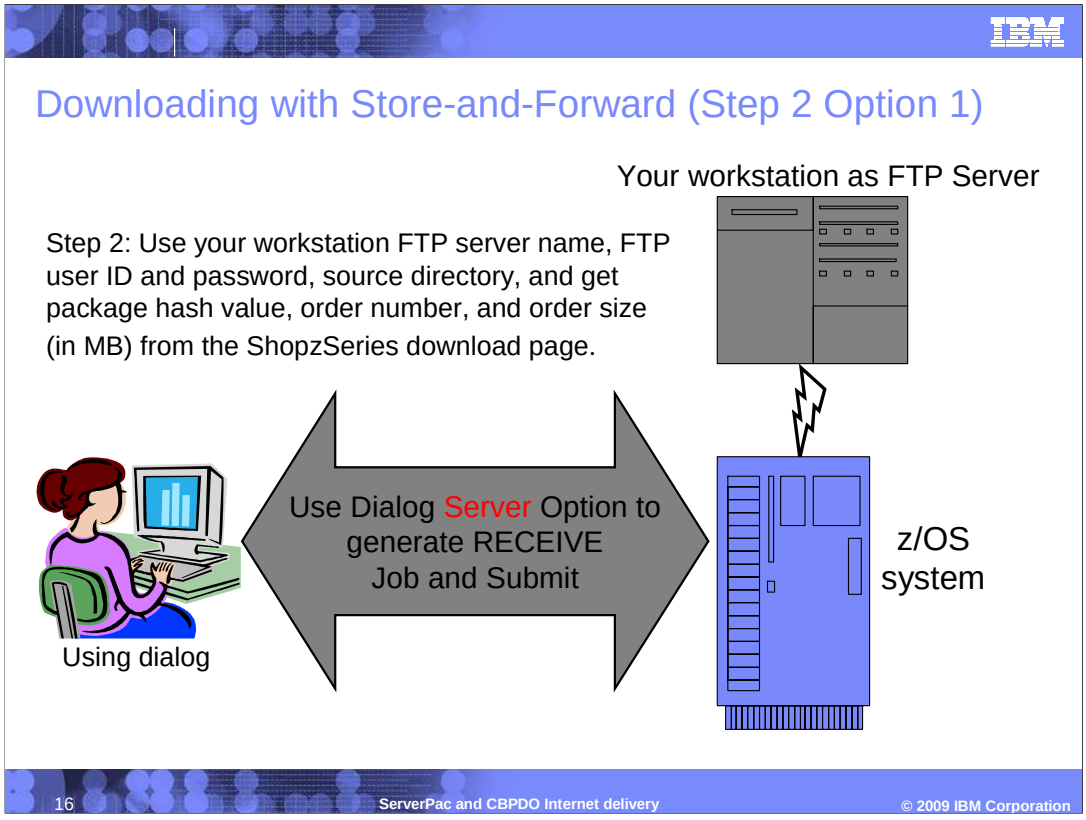
What if your z/OS system is not connected to the Internet?

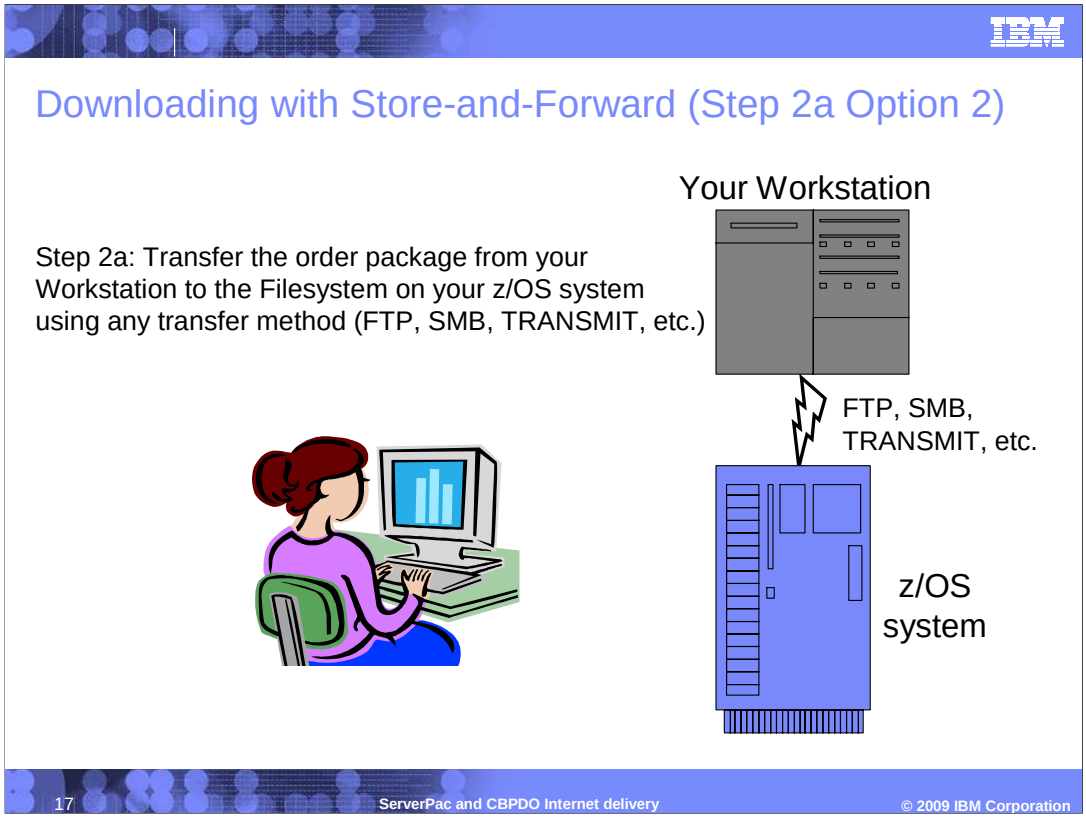
In this case, you can use the store-and-forward download method if you have an FTP server or workstation that can connect to the Internet. Use Download Director (see the link on the download page) to download your order from the IBM server to your server or workstation. Then...



Once your order is on your FTP server or workstation defined as a FTP server, use the Dialog "Server" option to generate the RECEIVE job. Specify your server as the source server, with the appropriate user ID, password, and source directory. Always specify the hash value from the download page no matter which server is used to do the download to the z/OS system.

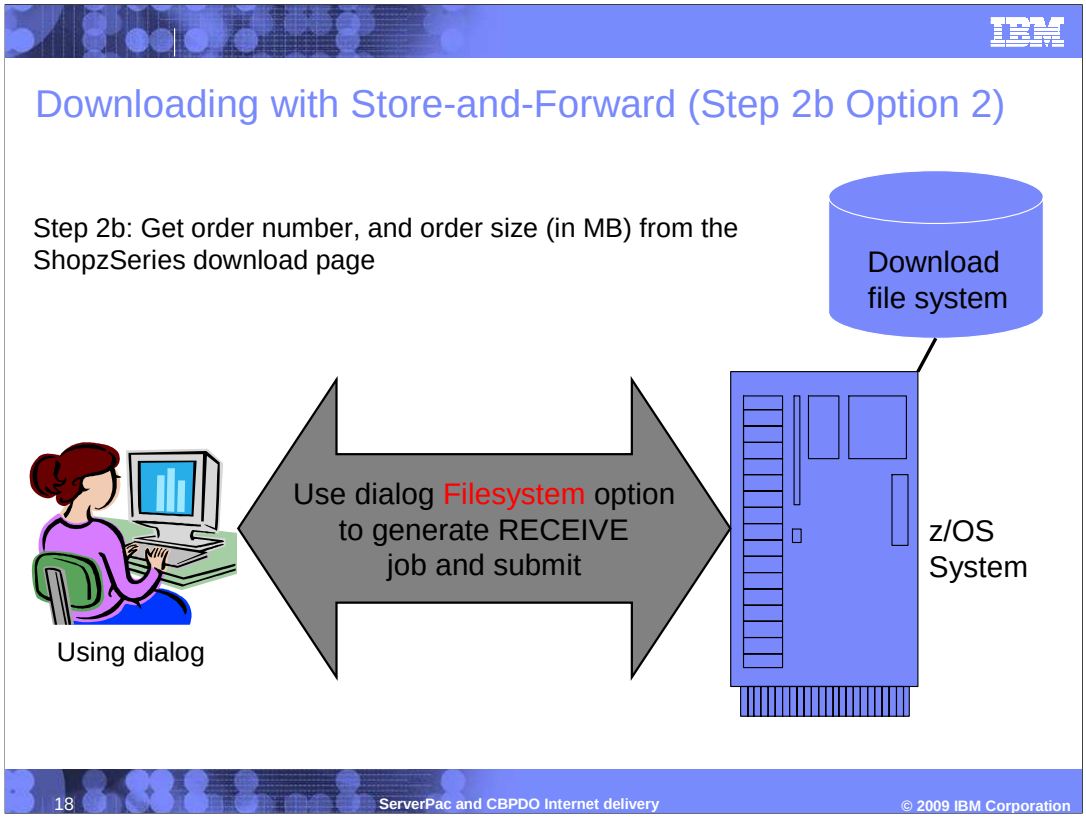
From there on, it is the same as if you were using an IBM server.

The advantage of using store-and-forward is that your z/OS system need not be connected directly to the Internet. The disadvantage is that you cannot begin to work with your order until the entire thing has been placed on your FTP server *and* Phase 1 of the RECEIVE job has run on your z/OS system.



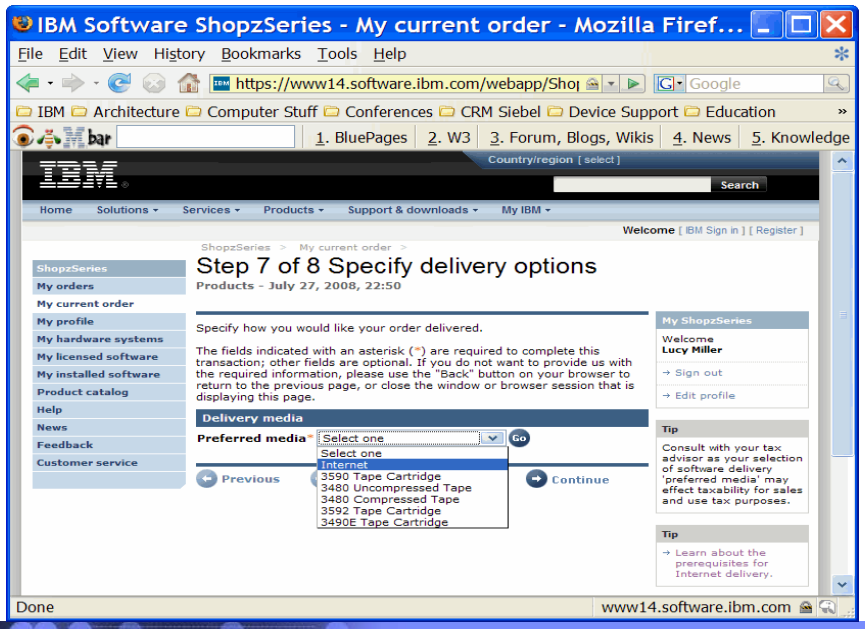
Once your order is on your FTP server, you have another option. You can transfer the order to your z/OS system's Download file system using any transfer method you choose, such as FTP, SMB, TRANSMIT, and so on. This method uses your Intranet and bypasses the hash value specification. If you choose to use SMB to network-attach your z/OS download file system, you can point Download Director to that network drive. Be sure the SMB configuration is setup for binary downloads.

The advantage of using store-and-forward is that your z/OS system need not be connected directly to the Internet. The disadvantage is that you cannot begin to work with your order until the entire thing has been placed on your FTP server *and* the order has been transferred to your z/OS system's Download file system.



Once your order is on your z/OS system's Download file system, use the Dialog "Filesystem" option to generate the RECEIVE job. The generated RECEIVE job will obtain the order directly from the Download file system and does not invoke the SMP/E GIMGTPKG utility.

ShopzSeries ordering – Step 7 (Specify Internet delivery)



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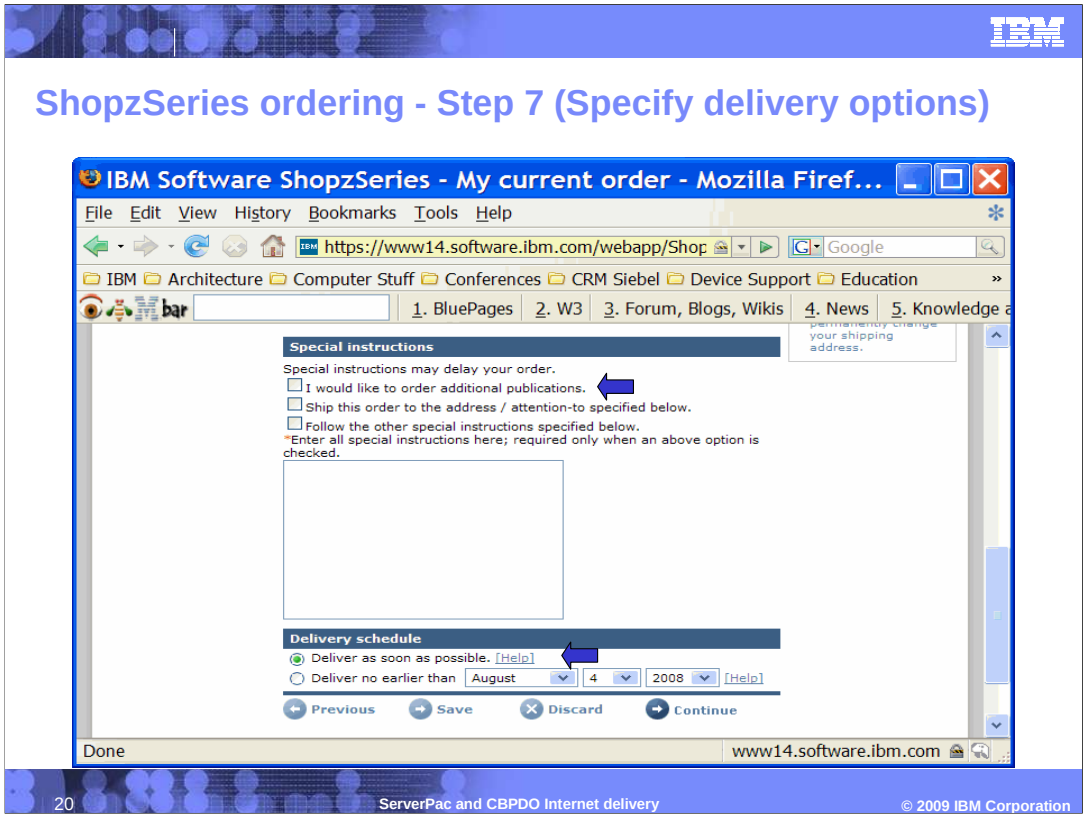
Here is Step 7 of creating your ServerPac or CBPDO order in ShopzSeries. In this step, you choose your delivery options. You can choose “Internet” from the Preferred media selection list.

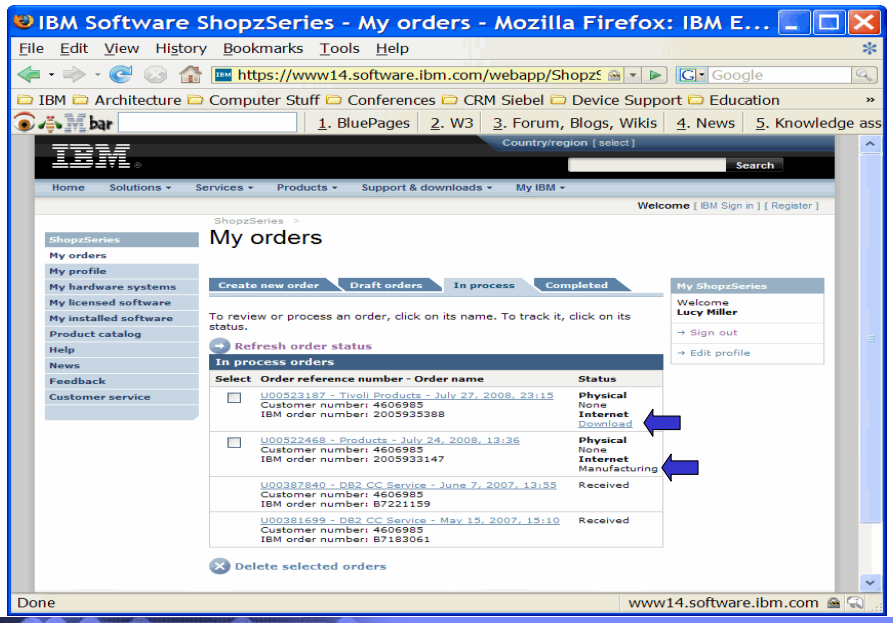


ShopzSeries Ordering Step 7 – Specify Delivery Options (continued)

After you choose “Internet” as your preferred media, when “Enter” is pressed, you will see an area for special instructions. All content for Internet orders is delivered electronically. You have the option to choose whether you want to receive any additional publications. These will be delivered as physical materials. If you select this option or provide any special instructions, your order might be delayed since it will be routed to the Sales Center for handling the special instructions.

The default is to deliver your order as soon as it has been manufactured. Click the “Help” link for a description of manufacturing times. If you do not want your order delivered before a certain date, perhaps because you will be on vacation, you can specify the delivery date you want, but it can not be earlier than the specified delivery date on the panel.

ShopzSeries ordering – Order ready for download



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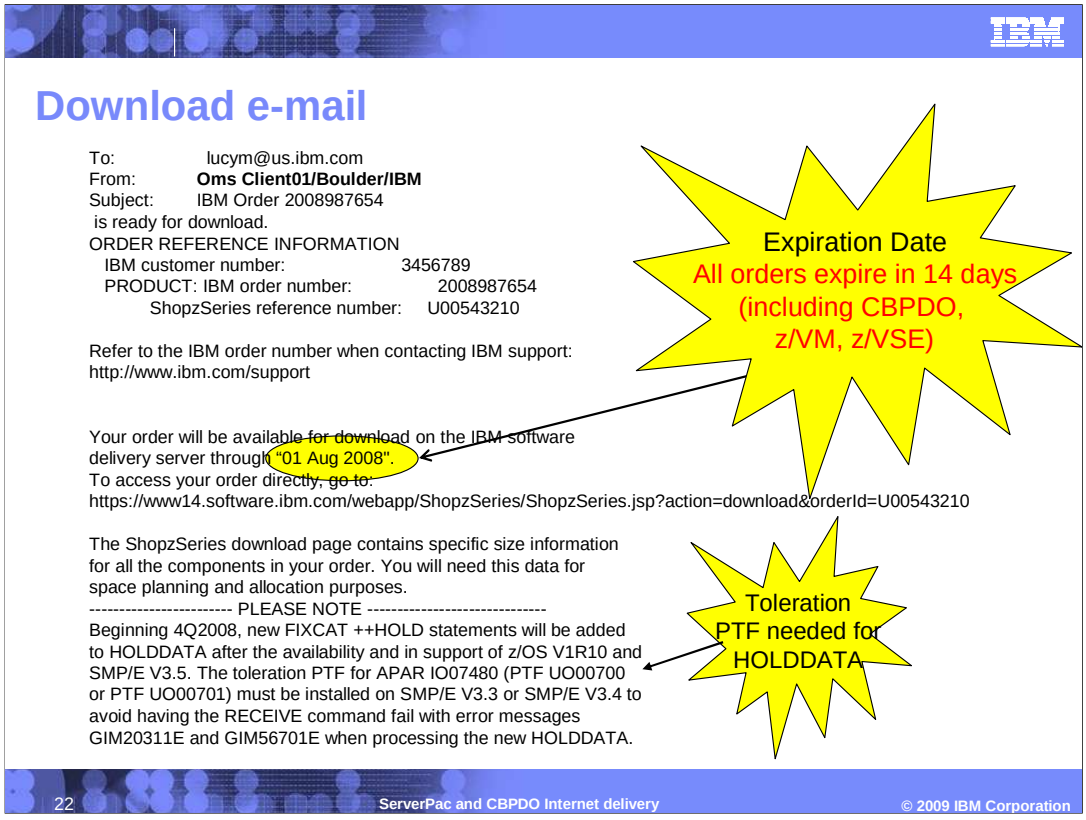
Once your order has been submitted, you can check the status of your order within ShopzSeries under the “In Progress” tab. You can find the order you submitted by your order description. The ShopzSeries order number is also provided.

Status for both physical and Internet components can be displayed which is useful for orders that contain both types of content. If your order is still in progress, you will see that the order is in “Manufacturing” status for the content being delivered physically, for example, CDs. When your order is ready, the status for Internet portion will have changed to “Download”.

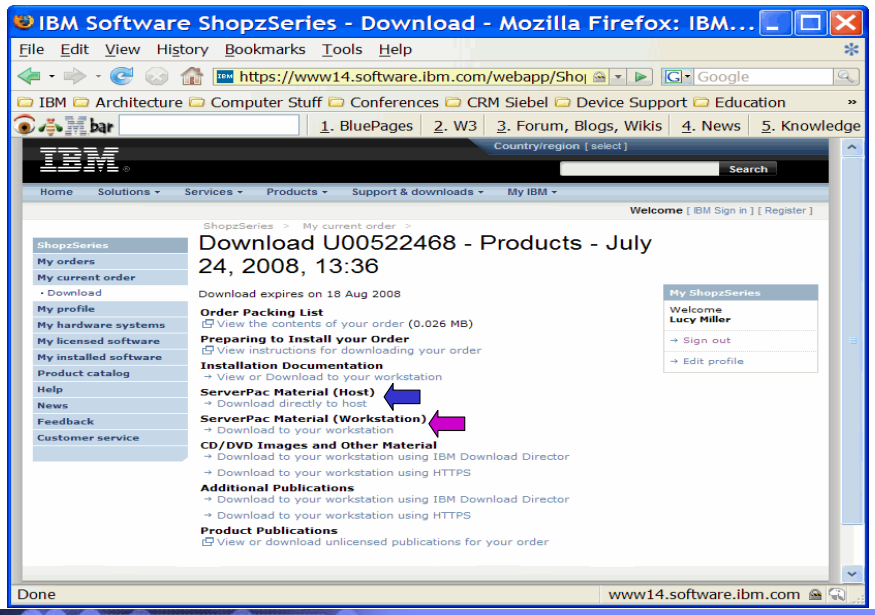
IBM will have sent you an e-mail stating that your order is ready for download. This e-mail will contain a link to go directly to the download page for your order after you have signed in to ShopzSeries. Alternatively, you can sign in to ShopzSeries and go to the “In Process” tab, select your order and press the “Download” link.



Here is an example of the e-mail you will receive when your order is ready for download. This e-mail contains your IBM order number and your ShopzSeries reference number. If you have a problem with your order, you will need to provide this information to the IBM support personnel.

You will also find the expiration date for your order. All orders (including CBPDO, z/VM, z/VSE) are retained on the IBM server for 14 days. A direct link is provided that will take you directly to your download page (after you sign in to ShopzSeries of course).

ShopzSeries primary download page



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Here is a sample ShopzSeries primary download page. It contains links for

•Packing list for your order which describes all the components of your order and whether they were delivered physically or electronically.

•An installation checklist for preparing to install your ServerPac Internet order.

•Installation documentation used for ServerPac which can be viewed (PDF or text file) or downloaded.

•ServerPac material which can be downloaded directly to host (blue arrow) or to your workstation first (purple arrow).

•Additional material such as client code CD/DVD images associated with the products in your order which you must download to your workstation.

•Product publications that are associated to your order which you can view or download.

•Additional publications such as licensed publications or collection kits that are associated to your order which you must download to your workstation.

ShopzSeries installation documentation secondary page

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When you click the link for Installation Documentation, you come to this secondary download page. This page contains the information you may need to prepare for and understand Internet Delivery and the download scenarios you have.

Every secondary page will have a file that contains instructions for proceeding on that page. On this page, the Information Roadmap file describes the installation documents provided on this page. Press the “View Now” link to view the file.

The *z/OS Planning for Installation* book provides all the planning information you need for Internet Delivery. When you press the “View Now” link, the PDF version of this book is launched. You can view or save the PDF.

The *ServerPac Using the Dialog* book provides all the information you need or want to know about using the ServerPac Dialog. There are many hints and goodies in this book that can make your ServerPac installation smoother. When you press the “View Now” link, the PDF version of this book is launched. You can view or save the PDF file.

The *ServerPac Installing Your Order* book is customized for your order and describes your order content, the installation jobs, and information about the products in your order. When you press the “View Now” link, the PDF version of this book is launched. You can view or save the PDF file. This book is also packaged with your order in PDF and BOOK formats and is unloaded by the RECEIVE job.

ShopzSeries download directly to host secondary page

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When you click the link to download directly to your z/OS system, you come to this secondary download page. This page contains the information required for the Dialog to generate the RECEIVE job that will download the order directly to the host system. The Instructions file provided will contain instructions for the download directly to host method.

The first link is always used. When you click the link, a text file is displayed that contains information needed by the ServerPac Dialog panels to generate the RECEIVE job to download your order. This dialog data file contains the order number, order size, server name, source directory, FTP user ID and password, and the hash value needed for the download. You can cut and paste the information right onto the appropriate dialog panel.

Select the second link if you do not have the ServerPac Dialog at all. The Dialog must be downloaded and setup to download the rest of the order. When you click the link, the LOADRIM bootstrap job is displayed. You can cut and paste the job and run it on your z/OS host system. This job will download the ServerPac Dialog and the order-specific files needed for the dialog. Once you have obtained the dialog, you can invoke it and proceed to generate a RECEIVE job that will download your order. Since saved configurations cannot be accessed from a new copy of the dialog, this job is recommended for new ServerPac customers only.

Select the third link if you already have the ServerPac Dialog but its level can not process Internet orders. Most ServerPac users will *not* need to use this option, since the required dialog level was supplied with ServerPac for z/OS V1.6 and higher. When you click the link, the EUPDATE JCL job is displayed. You can cut and paste the job and run it on your z/OS host system. This job will migrate the existing ServerPac Dialog to the level required to generate a RECEIVE job that will download your order.

ShopzSeries download to workstation secondary page

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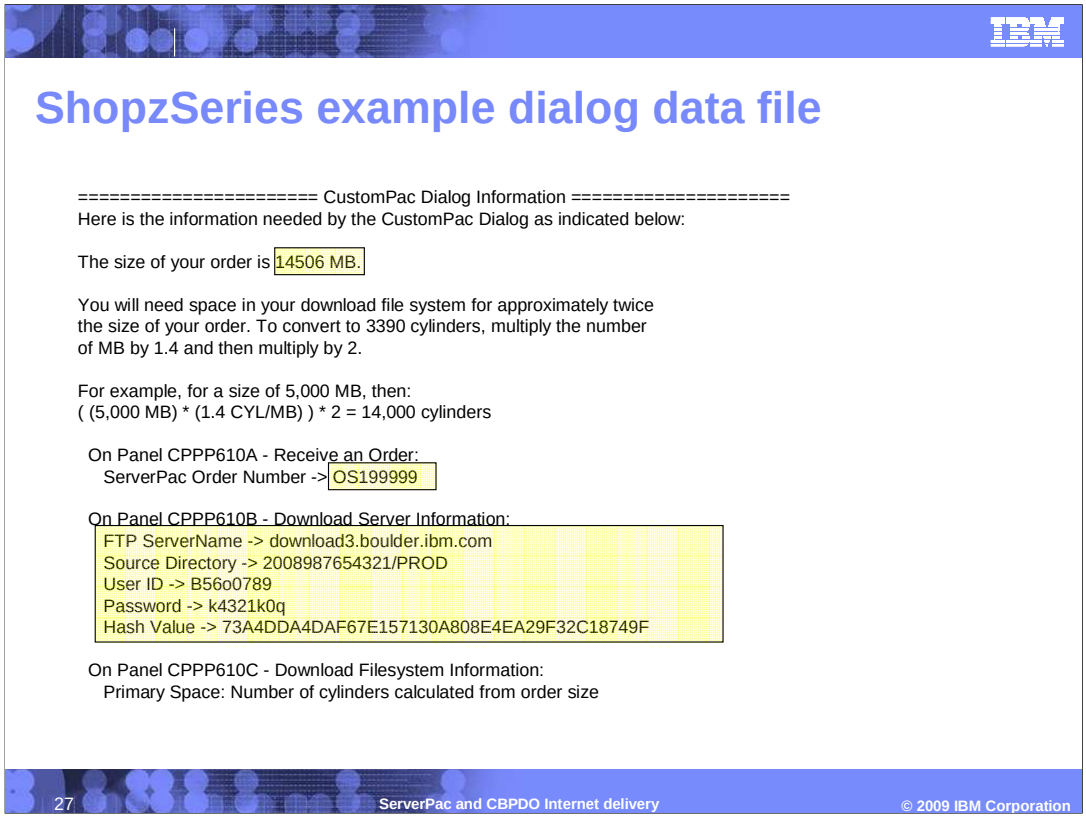
When you click the link for downloading to your workstation, you come to this secondary download page. This page contains the information required for the Dialog to generate the RECEIVE job that will download the order from your workstation directly to the host system. The Instructions file provided will contain instructions for the download to your workstation method. There are four links you can select depending on the existing status of your ServerPac Dialog.

When you clink on the first link, IBM's Download Director is invoked to download your order to your workstation. After the order resides on your workstation, you will need to either

1. Use the Dialog "**Server**" option to download your order to your z/OS host system from your workstation configured as a FTP server. You must substitute your workstation information instead of the IBM Server information from the dialog data file when pasting server information into the Dialog panel. The generated RECEIVE job will then point to your workstation as the server used to download your order.

2. Use any method of your choice to get your order up to the z/OS host system's Download file system. If you choose to use SMB to network-attach your z/OS Download file system, you can point Download Director to the network drive. Be sure SMB is setup for binary download. Then use the Dialog "**Filesystem**" option to generate a RECEIVE job that will process your order directly from the Download file system.

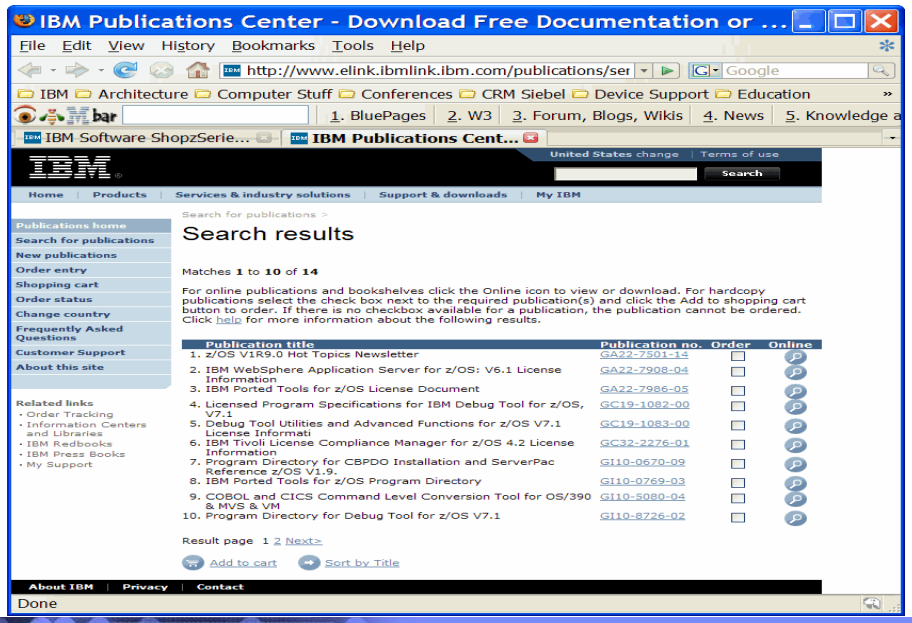
The last three links are the same as those on the Direct to Host secondary download page. Even though you are downloading to an intermediate node, you may still need to install a new ServerPac Dialog or migrate your existing ServerPac Dialog to the level that supports Internet delivery, but most users should already have the appropriate dialog level. **For all of the last three links, you must substitute your workstation information in place of the IBM server information provided in the LOADRIM and EUPDATE jobs and the Dialog Data File.**



Here is an example of the Dialog Data file displayed when you click its link from the secondary download page. As you can see, it contains your order number, the size of your order, the IBM server name, source directory, FTP user ID and password, and the hash value for your order.

You can cut/paste this information into the appropriate ServerPac Dialog panel. Remember to substitute your workstation information instead, when you choose to use the store-and-forward download method and choose to use the Dialog “Server” option to “download” your order to your z/OS host system using your workstation as the FTP server.

ShopzSeries product publications secondary page



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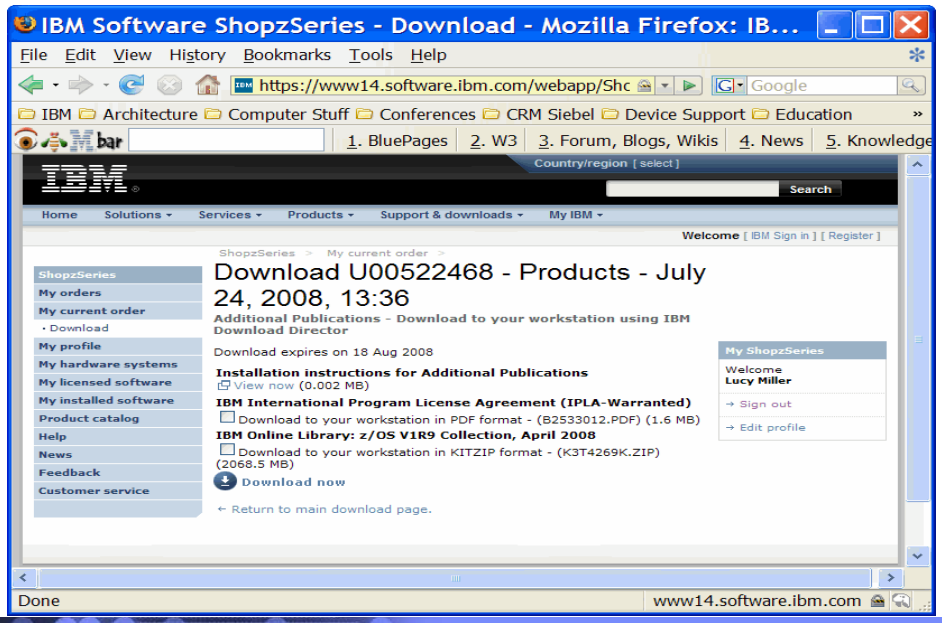
When you click the link for Product Publications, you come to this secondary download page. This is a customized Publications Center page that contains links to the basic publications associated to the products contained in your ServerPac order. You can view or download the publications by clicking on the “Online” icon. Also, you can order a hardcopy version by selecting the check box then clicking “Add to cart” on the bottom of the page. By default, the publications are sorted by publication number but you can sort them by title by clicking on the Sort button at the bottom of the page.

ShopzSeries additional publications secondary page (DD)



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When you click the link for Additional Publications (Download Director), you come to this secondary download page. This page contains links to additional publications, such as softcopy collection kits and licensed publications associated to the products contained in your ServerPac order. You must download these to your workstation if you want to obtain them. They are not viewable from this page.

On this page, you will use IBM's Download Director to download these publications to your workstation. You may select one, a few, or all of the publications by selected the appropriate check box. When complete, press the "Download Now" button at the bottom of the page.

ShopzSeries additional publications secondary page (HTTP)

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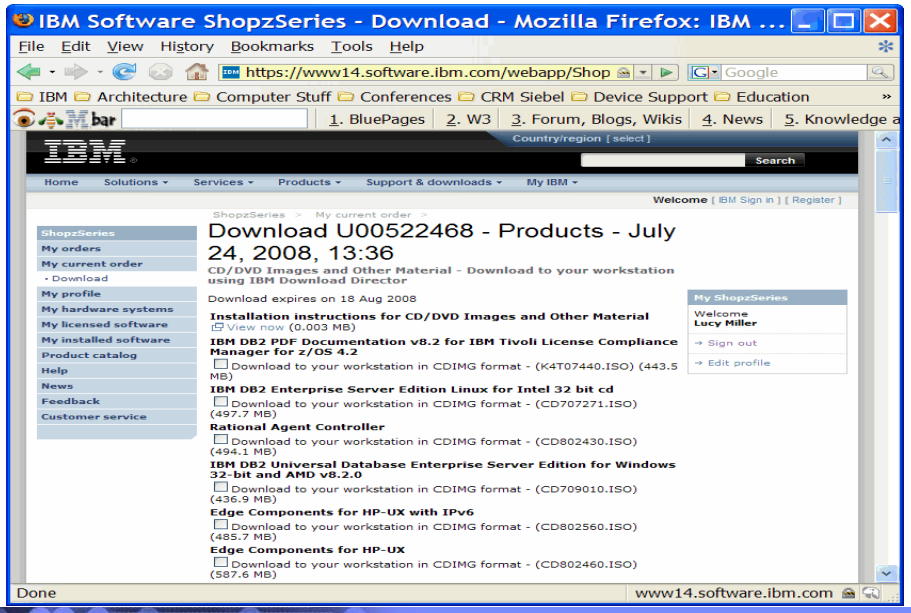
When you click the link for Additional Publications (HTTP), you come to this secondary download page. This page contains links to the same list of additional publications, such as softcopy collection kits and licensed publications associated to the products contained in your ServerPac order. You must download these to your workstation if you want to obtain them. They are not viewable from this page.

On this page, you will use HTTP to download these publications to your workstation. When you select this download option, you can only download one publication at a time. No JAVA is required to use this download option.

ShopzSeries CD/DVD images secondary page (DD)



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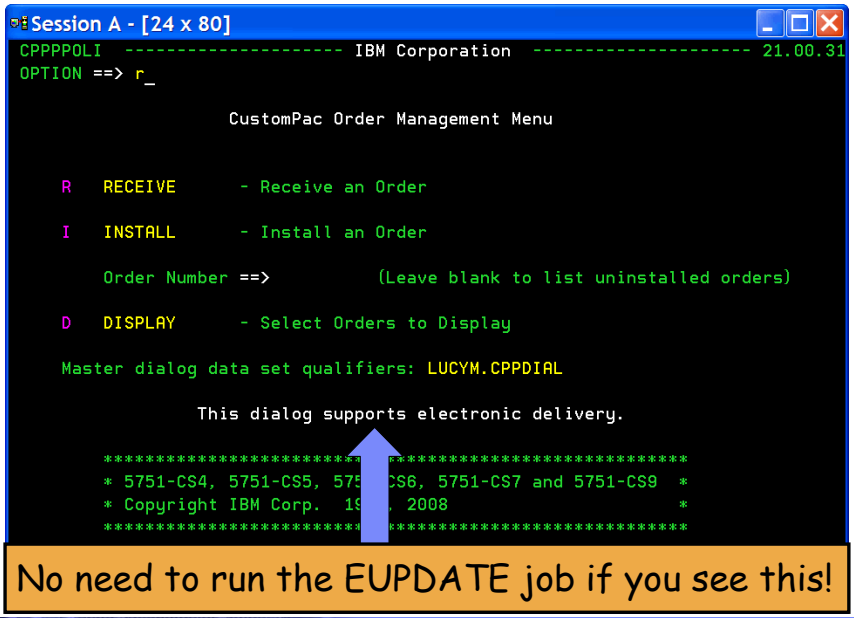
When you click the link for CD/DVD Images and Other Material (Download Director), you come to this secondary download page. This page contains links to CD/DVD images, such as client code associated to the products contained in your ServerPac order. You must download these to your workstation if you want to obtain them. On this page, you will use IBM's Download Director to download these CD/DVD images to your workstation. You can choose one, a few, or all of the images by selecting the appropriate check box. When complete, press the "Download Now" button at the bottom of the page.

Similarly, when you click the link for CD/DVD Images (HTTP), you come to a similar secondary download page which contains links to the same list of CD/DVD images. On this page, you will use HTTP to download these images to your workstation one at a time.

Depending on what was ordered, some of the files may be packaged in a .zip format. You will need to extract those files. In some cases the extracted files are usable directly after they are extracted (**Hint:** Review the extracted materials for files such as readme.txt, index.htm, or index.html to get started.). In some cases your order may contain images provided as ISO 9660 images with a file extension of .iso. An ISO 9660 CD-ROM image is a single large file that is an exact representation of the data and programs as they appear on a CD, reflecting both the content and logical format. To use these files you will need to either create the physical CD or use virtual CD software which supports .iso files.

ServerPac dialog - RECEIVE an order



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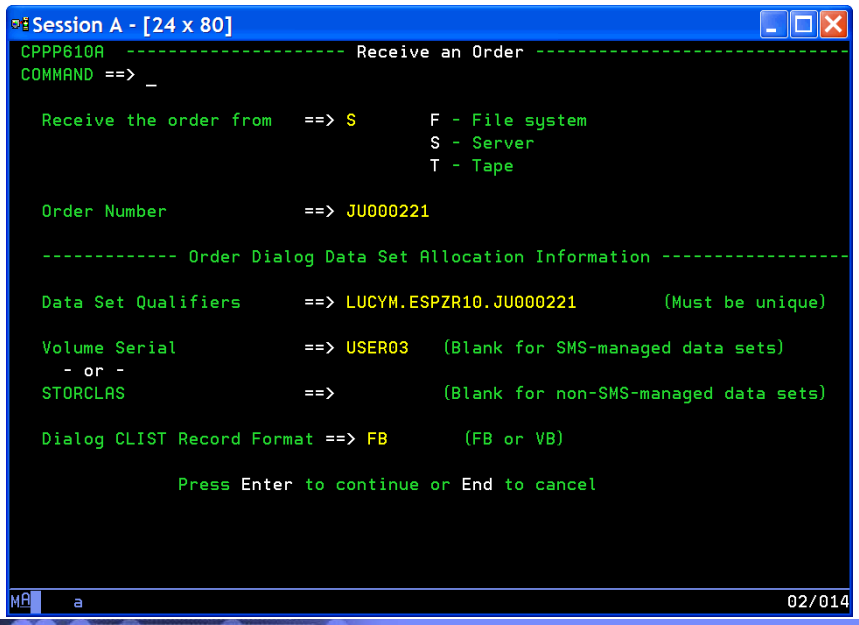
So what does all of this look like in the installation dialog?

Here is the main panel of the ServerPac Dialog that has been migrated. You can see that it shows "This dialog supports electronic delivery". If this is the case, then you do NOT need to run the EUPDATE job. You select Receive an Order from this panel as usual.

Specify location of order - Server



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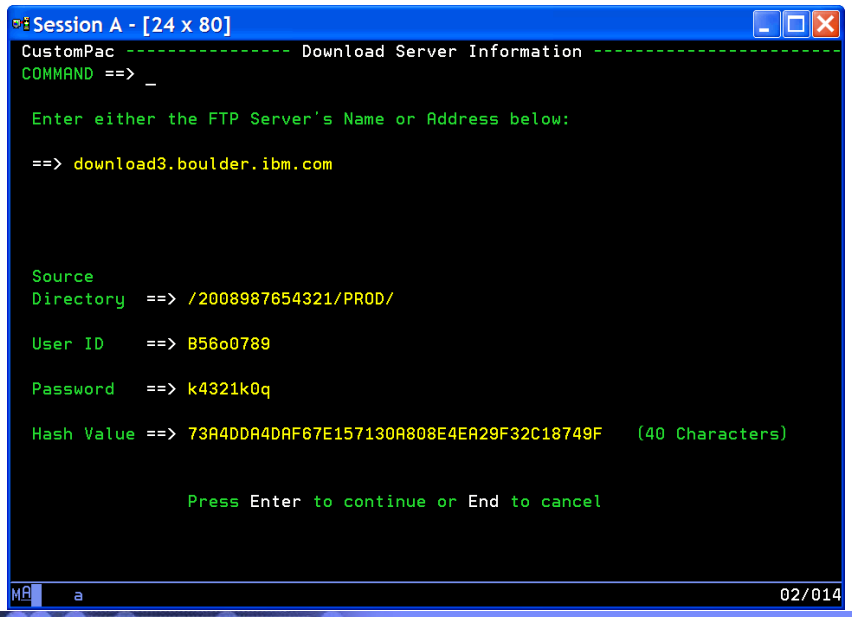
When you select Receive an Order from the main menu, this is the next panel you will see. This panel collects the information that is common to all orders, whether they will be downloaded or delivered on tape. In this case, the order will be received from a server (that is, download it).

The rest of the panel should be pretty straightforward. However, note that there is no data entry field for Unit if you enter a volume serial. The dialog will retrieve the unit information from the system so that you do not have to enter it. Note that the volume whose serial you enter here must be online.

Specify download server information



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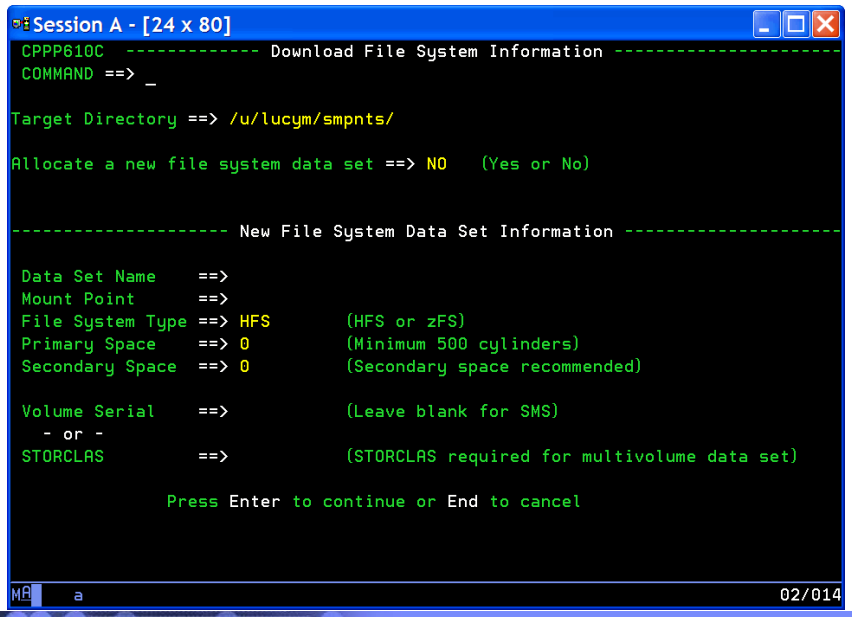
Tell the dialog where the server is and give it some information it needs to retrieve the order. The server name or address can point to an IBM server, if you will download directly to your z/OS system, or to your own server if you used Download Director to get the order from the IBM server and will download it from there to your z/OS system. **Note:** Your workstation can be setup to be a FTP server.

The source directory is where on the server the files that contain your ServerPac are located. The user ID and password are used to establish the FTP session. The hash value will be used during the download to compare the one generated at IBM to the one generated on your system. If they are equal, then what was sent to you is what you received. If they do not match, then the downloaded data is corrupted, and you need to try again.

If you are downloading from the IBM server, you must specify the server name, source directory, user ID, password, and hash value from the download page here.

Specify download file system information



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Now that you have told the dialog where to get your ServerPac order, you need to tell it where to store it temporarily while you work with the configuration and generate the installation jobs. On this panel specify the destination directory for the download. If you want the dialog to add a job step that creates a new file system data set and mount it, then say “yes” for “Allocate a new file system data set,” and fill in the fields below the line that says “New File System Data Set Information.”

Make sure you have enough space for double the size of the order. This will allow for the workspace required to GIMUNZIP the archive files. Also, though it says so right on the panel, it bears repeating: **Allocating secondary space is highly recommended!** These data sets tend to be large, particularly for z/OS orders.

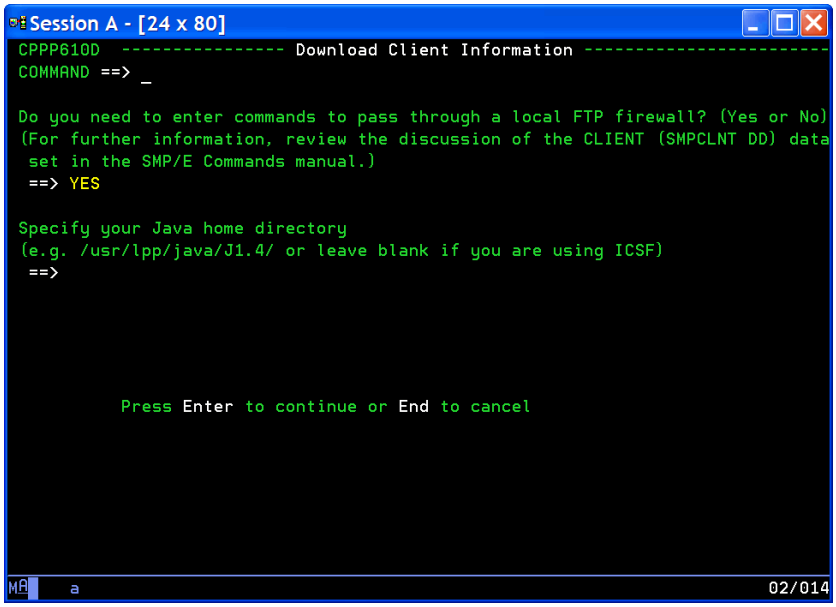
The download page will show the space required for the order in megabytes. To convert to 3390 cylinders, multiply the number of MB by 1.4 and then multiply by 2. For example, if the download page says the order is 5,000 MB, then:

((5,000 MB) * (1.4 CYL/MB)) * 2 = 14,000 cylinders

Note that 14,000 cylinders is larger than a 3390-3; you will need to have defined a volume of this size or larger to download a 5,000 MB order to a single-volume file system data set.

As on the prior panel, there is no data entry for the Unit if you choose to enter a volume serial. The volume whose serial you enter must be online; if there is not enough space on the volume, the dialog will tell you. In this case, you either need to choose a different volume or free some space on the volume you chose.

Specify download client information



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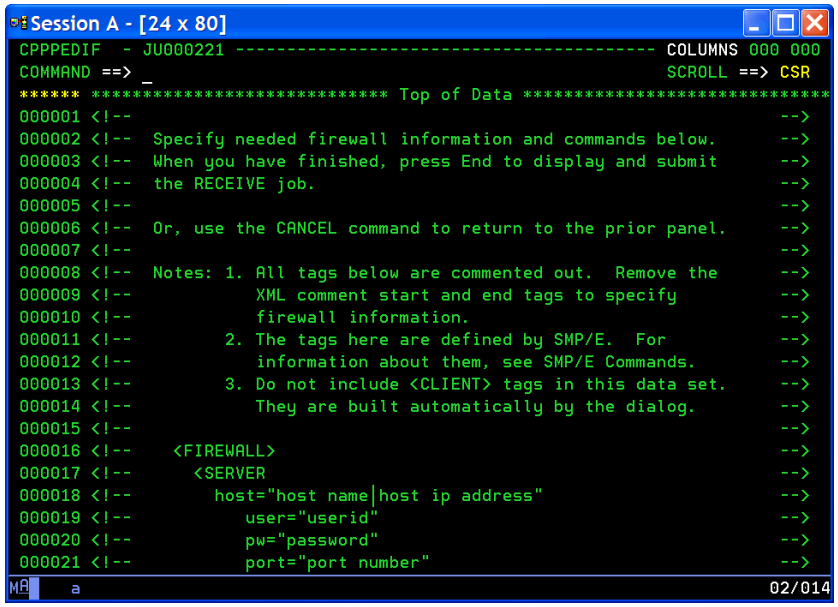
If your installation uses a firewall, then it probably needs to be passed specific commands to allow a connection to a server to be established. Assuming that most z/OS systems that connect to the Internet do have firewalls, answer “Yes” to “Do you want to enter firewall commands.”

If you are not using ICSF, you will need to provide the location of your Java directory. This is used in the RECEIVE job so the SMP/E GIMGTPKG utility can find the Java class for calculating hash values to verify the integrity of the data that is downloaded. If you are using ICSF, leave it blank.

Specify firewall commands



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The firewall commands must be entered in the format that the GIMGTPKG program understands, which are in the form of a <FIREWALL> tag and its subtags. Because it is not possible to know what your firewall commands might be, a syntactically-correct example of a <FIREWALL> tag is provided. Remove the XML comment delimiters (<!– and -->) and edit as needed if you have anything that needs to be passed to the firewall.

Note: If you get here by accident, there is no need to back up. The data displayed is always included whether you edit it or not, and the XML comments will not cause a problem later on if they are present. Just hit “End” and keep going.

Remaining steps

- Specify Jobcard Information
- Edit Jobcard
- Generate RECEIVE Job
- Edit and Submit RECEIVE Job

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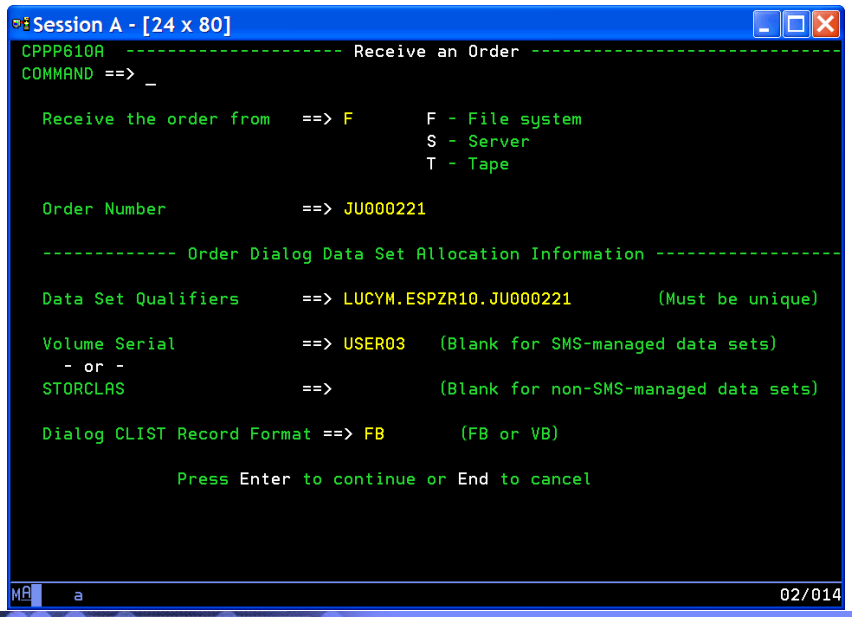
The next steps are to specify the Jobcard and generate the RECEIVE job.

The jobcard specification has been simplified. The dialog will put you in an ISPF Edit session where you can edit the default JOB statement supplied or copy in your own JOB statement and save it. This JOB statement will also be used to generate the installation jobs later (but it can be changed by selecting it from the Installation option's job list and editing it there).

Generating the RECEIVE job is the same as before. When you submit the RECEIVE job, you will need to exit the Dialog so the first part of the download can update the Dialog to the latest level.

Specify order location – File system



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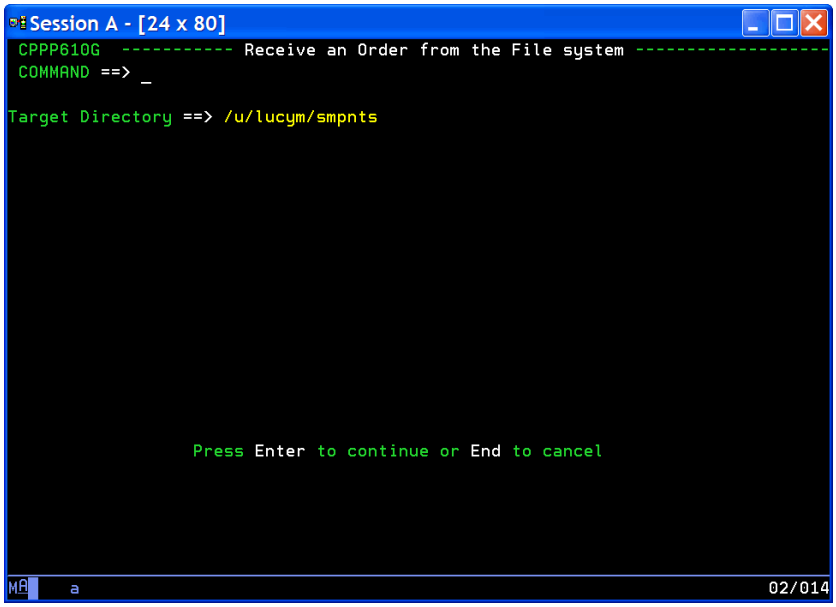
Here is the Dialog panel flow if you choose to use the "File system" option for "RECEIVE an Order". This option should be used when the order already resides in the Download file system. This is one of the scenarios for the store-and-forward download method as described earlier.

Remember the first Receive an Order panel? Here it is again. This time, after “Receive the order from,” say “F” for “File system.” All the rest of this panel is the same no matter how you get your ServerPac.

Specify download file system information



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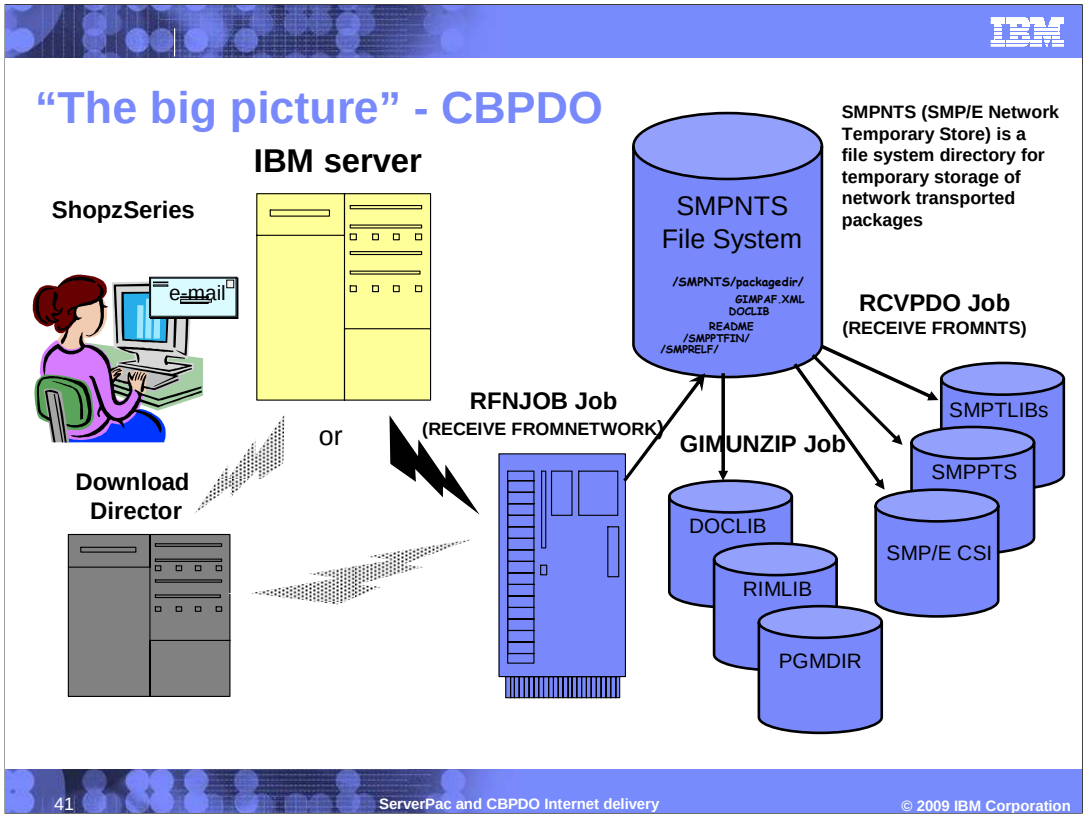
Since the order already resides in the Download File System, you will need to tell the dialog the file system information so it can locate your order. Since your order does not need to be downloaded, all the panels for gathering download information are bypassed. The next steps are to specify the Jobcard and generate the RECEIVE job which are the same as before.

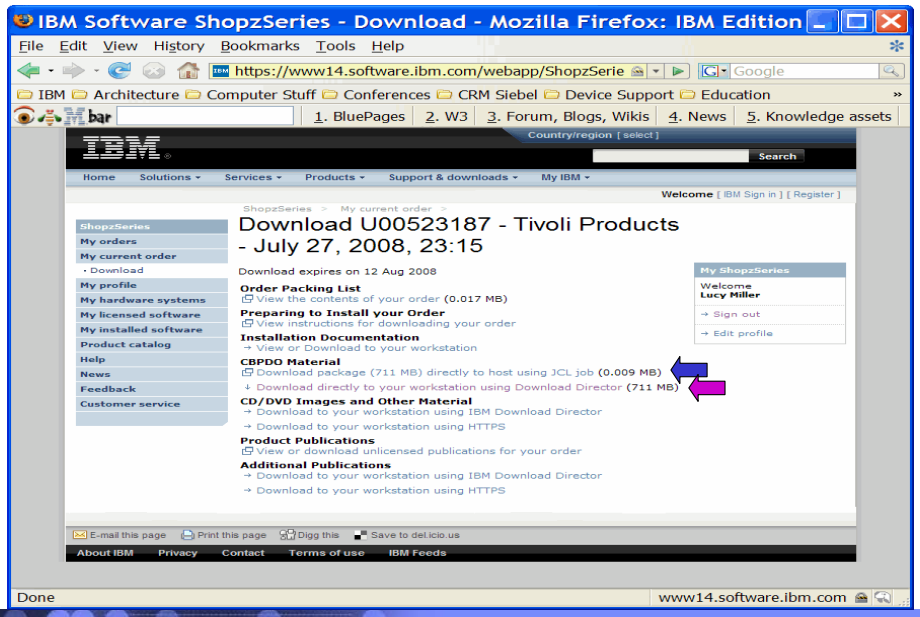


Here is the high-level overview of Internet delivery for CBPDO. After you submit your order with Internet delivery specified as your preferred media option, you will receive an e-mail from IBM when your order is ready for download. When you logon to ShopzSeries to access your order, the download pages are dynamically built. You can either download your order directly to host or download it to your workstation first and then upload it to the host.

A customized job RFNJOB is provided on the download page that you can cut and paste and then run from your z/OS host system. This job invokes SMP/E's RECEIVE FROMNETWORK command to download your order and place it into the SMPNTS specified download file system and RECEIVE the order.

Alternatively, you can use Download Director to download your order to your workstation first. Then you upload the order to your z/OS host system. After this, you can then run a job that invokes the SMP/E RECEIVE FROMNTS command to RECEIVE the order.

ShopzSeries primary download page – CBPDO



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Here is a sample ShopzSeries primary download page for CBPDO Internet delivery orders. It contains links for

•Packing list for your order which describes all the components of your order and whether they were delivered physically, electronically, or previously delivered.

•An installation checklist for preparing to install your CBPDO Internet order.

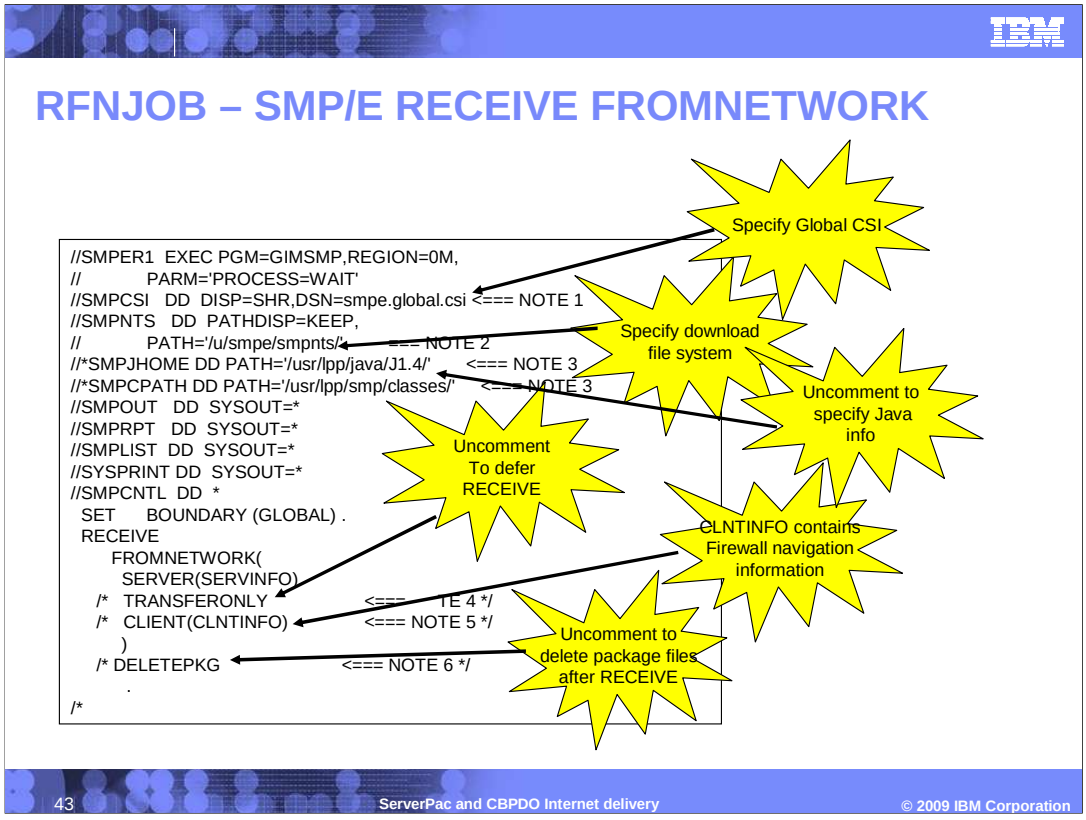
•Installation documentation used for CBPDO which can be viewed (PDF or text file) or downloaded.

•CBPDO material which can be downloaded directly to host (blue arrow) using the RFNJOB JCL job or to your workstation first (purple arrow) using Download Director.

•Additional material such as client code CD/DVD images associated with the products in your order which you must download to your workstation.

•Product publications that are associated to your order which you can view or download.

•Additional publications such as licensed publications or collection kits that are associated to your order which you must download to your workstation.



To download your orders directly to your z/OS host system, you will need to cut and paste the supplied JCL job (RFNJOB) and run it from your z/OS host system. Here is an example of the components of RFNJOB.

This section contains the basic SMP/E RECEIVE FROMNETWORK command. You will need to edit the job to supply your GLOBAL CSI and the path name to specify your download file system. If you intend to use the SMP/E Java class instead of ICSF, then you should uncomment the SMPJHOME and SMPCPATH DD statements and provide the Java information. You may need to specify information for firewall navigation. If so, you will need to uncomment CLIENT operand. You may choose to uncomment TRANSFERONLY which will defer the SMP/E RECEIVE after the order is downloaded, DELETEPKG to delete the package files after they have been received.

RFNJOB – IBM SERVER information

```
//*
//* The information provided in the SERVINFO DD has
//* been customized for your order. Please do not
//* alter this information.
//*
//SERVINFO DD *
  <SERVER
    host="download3.boulder.ibm.com"
    user="B123a890"
    pw="c45D876e"
    >
    <PACKAGE
      file="2008072823605/PROD/GIMPAF.XML"
      hash="A954007F4B7F3XX744D755E5C8B090EF3EE909F2"
      id="OSP19278"
      >
    </PACKAGE>
  </SERVER>
/*
//*
```

Customized download server access information

Customized package access information

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This section of the RFNJOB contains the IBM server information which is provided in the SERVINFO DD statement. This section is customized by IBM and provides the specific node name, user, password, file name, and hash value to access the package on the IBM server. You should not alter this information since it is unique for your order.

RFNJOB – CLIENT firewall information

```
//*
//* The data below is optional, and only a sample. If you require it
//* during SMP/E RECEIVE FROMNET processing, the information must be
//* customized for your unique firewall configuration. See the
//* "SMP/E Commands" manual for details of the CLIENT information.
//*
//CLNTINFO DD *                          <=== NOTE 5
  <CLIENT>
    <FIREWALL>
      <SERVER
        host="local_firewall_server_host"
        user="local_firewall_user"
        pw="local_firewall_pw"
        >
      </SERVER>
      <FIRECMD> USER &USER;</FIRECMD>
      <FIRECMD> PW   &PW;</FIRECMD>
      <FIRECMD> SITE &REMOTE_HOST;</FIRECMD>
    </FIREWALL>
  </CLIENT>
/*
```

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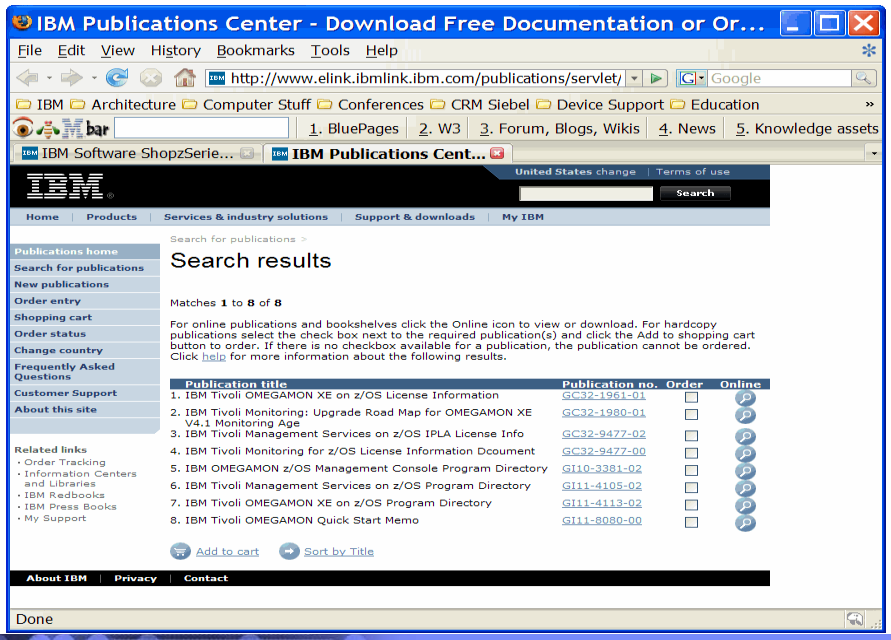
This section of the RFNJOB contains the CLNTINFO DD information needed to navigate your firewall, gateway, and so on. You may need to gather this information from your Networking co-worker.

ShopzSeries publications secondary page



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https://www14.software.ibm.com/webapp/ShopzSeries/ShopzSeries.jsp

•Download Director information can be found at

http://inetsd01.boulder.ibm.com/dldirector/faq.html

•*z/OS Planning for Installation, GA22-7504*

•*z/OS Cryptographic Services ICSF System Programmer's Guide, SA22-7520*

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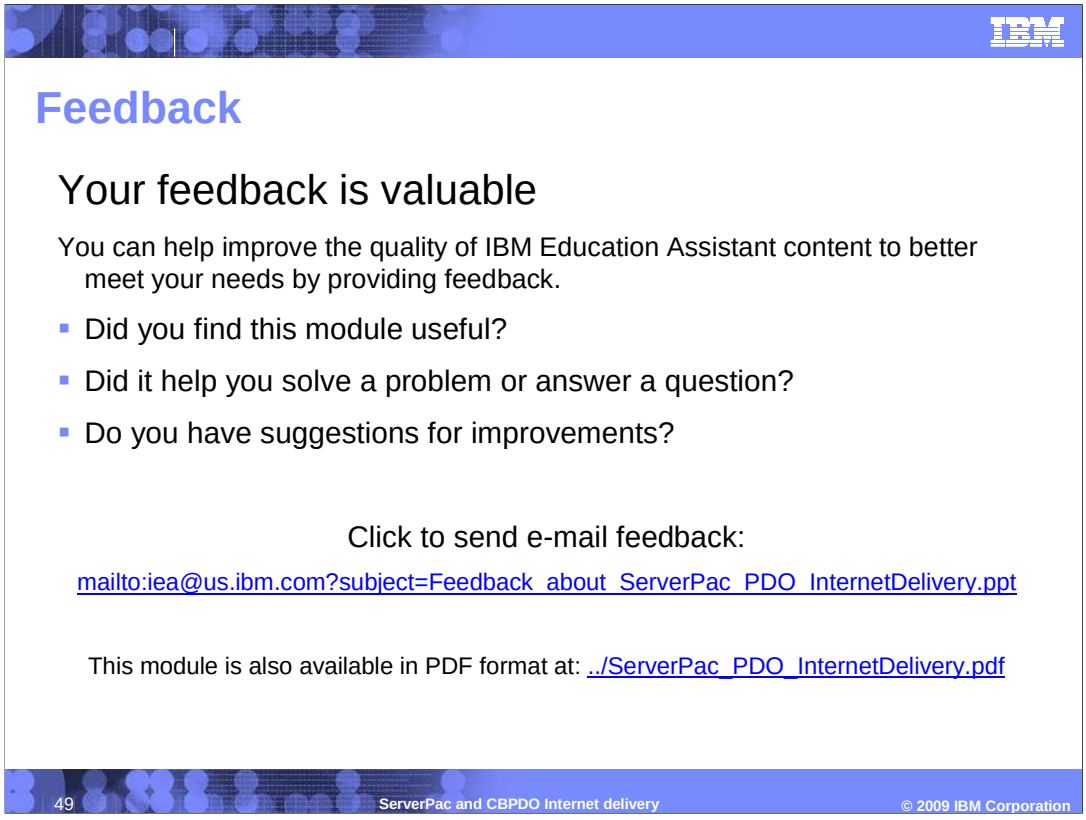

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