

The objective of this presentation is to teach you how the Enhanced Preventive Service Planning Tool (EPSPT) may help you save time and effort during the Preventive Service process.

A new process, which creates a list of Service Recommendations for selected "functions", will also be reviewed.

IBM Education Assistant	IEM
Trademarks	
CICS* DB2* IBM* IBM logo* IMS MQScries* OS/380* OS/380* System z Web5phere* Z/OS*	
* Registered trademarks of IBM Corporation	
Ine tollowing are trademarks or registered trademarks or other companies. Intel is a trademark of the Intel Corporation in the United States and other countries. Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both. Java and all Java-related trademarks and logos are trademarks or registered trademarks of Sun Microsystems, Inc., in the United States and other c Microsoft, Windows and Windows NT are registered trademarks of Microsoft Corporation. UNIX is a registered trademark of The Open Group in the United States and other countries.	countries.
* All other products may be trademarks or registered trademarks of their respective companies.	
Notes: Performance is in Internal Throughput Rate (ITR) ratio based on measurements and projections using standard IBM benchmarks in a controlled environmer user will experience will vary depending upon considerations such as the amount of multiprogramming in the user's job stream, the I/O configuration, the s workload processed. Therefore, no assurance can be given that an individual user will achieve throughput improvements equivalent to the performance ra	nt. The actual throughput that any storage configuration, and the atios stated here.
IBM hardware products are manufactured from new parts, or new and serviceable used parts. Regardless, our warranty terms apply. All customer examples cited or described in this presentation are presented as illustrations of the manner in which some customers have used IBM productions of the manner in which some customers have used the ma	cts and the results they may have
achieved. Actual environmental costs and performance characteristics will vary depending on individual customer configurations and conditions. This publication was produced in the United States. IBM may not offer the products, services or features discussed in this document in other countries, an	d the information may be subject to
change without notice. Consult your local IBM business contact for information on the product or services available in your area. All statements reparding IBM's future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only	
Information about non-IBM products is obtained from the manufacturers of those products or their published announcements. IBM has not tested those pro- performance, compatibility, or any other claims related to non-IBM products. Questions on the canabilities of non-IBM roducts should be addressed to the	oducts and cannot confirm the e suppliers of those products.
Prices subject to change without notice. Contact your IBM representative or Business Partner for the most current pricing in your geography. This presentation and the claims outlined in it were reviewed for compliance with US law. Adaptations of these claims for use in other geographies must be counsel for compliance with local laws.	e reviewed by the local country
2 4/27/2006	© 2006 IBM Corporation

The trademarks associated with this presentation can be found at the above URL.



The objective of this presentation is to teach you how the Enhanced Preventive Service Planning Tool (EPSPT) may help you save time and effort during the Preventive Service process.

To do this, the presentation will start with how to quickly locate Preventive Service Planning information and how to quickly determine what associated service is not on your system. Then the details of how to install and run the tool will be described.

A new process, which creates a list of Service Recommendations for selected "functions", will also be reviewed. The detail on how these lists are different from traditional Preventive Service Planning subsets and how to use the tool to reconcile service for these lists against your system will be included.



This agenda chart follows the approach discussed on the session objectives page.

An overview of the tool and its benefits will be discussed. It will be followed by details of each component. This will be followed by in depth instructions on the end user tasks that are needed to set up and run the tool.



The IBM Enhanced Preventive Service Planning Tool is available free of charge to IBM customers as part of IBM TechSupport. The Web site is noted on the bottom of this page.

This tool may save you time and effort by providing an easy method to determine what service has not be applied on your systems.

The first problem faced during the Preventive Service process is determining what information is applicable to your system. Often times, even if you know some of the information, such as a FMID, you may not remember the Preventive Service Planning Upgrade and Subset name. The IBM TechSupport Web site provides graphical user interfaces to help you quickly locate the correct information.

Secondly, the tool provides an automated method to quickly determine what service from selected Preventive Service Planning subsets is not installed on your system. This should reduce your research time so you can focus on only what recommended service is missing. This is especially helpful for hardware device subsets.

Additionally, a new process is being introduced which builds Service Recommendations lists based on a "Function". Historically, Preventive Service Planning information has been based at the FMID or device level. For software subsets, the majority of service recommendations come from a single component with perhaps a few cross product dependencies. However, in some cases, IBM provides a function that either spans multiple components, or is within a component. Some historic examples are "Sysplex Data Sharing" or "YE2000". The latest examples, for which IBM has created recommended service lists are: the IBM System z<sup>™</sup> Application Assist Processor (zAAP) and IBM Health Checker Checks for z/OS<sup>®</sup>. We have also created an intra-component list for Global Resource Serialization Star. These new lists are fully supported by the tool; you will able to use the graphical user interface to search for them as well as quickly determine what part of the list has not applied to your system.

Please note that acquisition and installation of service is beyond the scope of this tool. Also keep in mind that Preventive Service Planning subsets should still be reviewed manually for planning and migration considerations that are not directly related to an APAR or PTF.



The major steps in the Preventive Service Planning process, from the planning stage to environment ready stage, are illustrated at the top of the page by the light green arrow. The Enhanced Preventive Service Planning tool assists with the identification and comparison stages. Ordering and installation will have to be accomplished with other IBM Service tools.

First of all, let's start with the ability to quickly locate Preventive Service Planning information. The IBM TechSupport Web site, illustrated by the purple desktop icon on the left, has two interfaces to assist locating the correct Preventive Service Planning information. The top of the webpage allows you perform a simple or advanced search against all z/OS platform subsets. The lower part of the page allows selection by drop down for a list of key subsets. The key subsets include base components of supported z/OS releases, key subsets within major z/OS applications, and the latest key hardware devices and function service lists. Using either of these methods you can: a) view html versions of the selected subsets, and b) acquire extract files, which are service maintenance lists of all SMP/E installable APAR / PTF references within the subset and its associated extension subsets. If you want to acquire an extract file and you know the Preventive Service Planning upgrade and subset name, you can skip the web interfaces and acquire it directly on the z/OS host from the IBM ftp Web site noted in the diagram. Extract files are automatically reviewed and updated as needed on a daily basis.

Secondly, a Host Compare Program reduces the amount of time consumed in identifying which maintenance needs to be ordered and/or applied by providing an automated reconcile process. Before you can run it, the Host Compare Program will have to be downloaded and installed on your z/OS host system. This will only need to be done once. After installation, you can run this program to reconcile the selected extract files against a specified target zone. A report similar to the SMP/E REPORT ERRORSYSMODS will be generated. The report identifies all service from the extract files that has not been applied or installed based on the specified target zone.

Extract files will also be created for Functions. These extract files have the same characteristics as the extract files for traditional Preventive Service Planning upgrades and subsets; they can be selected from the graphical user interface, ftp'd and utilized by the Host Compare Program. Although the word "Function" will be used as an Upgrade name and the function keyword will be used as a subset name, no underlying RETAIN Upgrade and Subset will be created.



In the next few pages, I will cover the extract files, Web sites, the Host Compare Program and the report in detail.



Extract Files are intended as input to the Host Compare Program of the Enhanced Preventive Service Planning tool and are generally not intended for direct user consumption. The extract file can contain long lists of APAR / PTF information that may cross multiple FMIDs.

The main content of the extract file is the derived Service Maintenance List, which includes all SMP/E installable PTFs referenced in any section of the Preventive Service Planning subset, regardless of whether it was referenced by APAR or PTF. A specific APAR may be in the extract file multiple times, once for each associated PTF/FMID pair. Additionally, if a subset has one or more extensions subsets, they will all be automatically included in the extract file for the "base" subset. For instance, z/OS Release 4, which has an UPGRADE of ZOSV1R4, has a BCP subset and at the time of this document has extension subsets BCP/1 and BCP/2.

While not intended to be read, each extract file contains Header and Trailer Information that may be of use to the end user. The header has the date that the last extract update was performed. Although subsets are reviewed for changes on a daily basis, if the subset and its associated extension subsets have not had updates, as indicated in the Change Summary, neither the extract file nor the date will be updated. Also, in the header is the external FTP website and file name. This is useful, if you did not know the Preventive Service Planning Upgrade and Subset name, used the Graphical User Interface to find the html version of the subset and the associated extract file also has a trailer statement, which denotes the end of file. This can be used to ensure the file transferred correctly to the host. If the commented header and trailer are the only lines in the file, (there are no APAR / PTF entries), the extract file is considered empty. This occurs when the associated subset has no entries. The APAR/PTF entries in file contain the upgrade and subset names, and also differentiate the subset name if the APAR/PTF reference is in an overflow subset.

An example of extract file is included on the next page.

IBM Education Assistant	IBM
Sample Extract File	
/* Preventive Service Planning */	
/* UPGRADE: ZOSV1R6, SUBSET: BCP BCP/1 */	
/* Updates also available at ftp site: */	
<pre>/* ftp site = ftp://ftp.software.ibm.com/s390/pspapartool/ */</pre>	
/* ftp file = ZOSV1R6_BCP.txt */	
/* Last Extract: */	
/* Time = 22:00:23 */	
/* Date = 02/02/2006 */	
APAR(AW47139) FMID(HBB6606) FIX(UW76952) UPG(ZOSV1R6) SUB(BCP).	
APAR(AW47139) FMID(HBB6608) FIX(UW76953) UPG(ZOSV1R6) SUB(BCP).	
APAR(AA03295) FMID(HBB7703) FIX(UA04720) UPG(ZOSV1R6) SUB(BCP).	
APAR(AA03353) FMID(HBB7703) FIX(UA04194) UPG(ZOSV1R6) SUB(BCP).	
APAR(AA03683) FMID(HBB7703) FIX(UA05930) UPG(ZOSV1R6) SUB(BCP).	
APAR(AA04940) FMID(HBB7703) FIX(UA11776) UPG(ZOSV1R6) SUB(BCP).	
APAR(AA04956) FMID(HBB7703) FIX(UA06973) UPG(ZOSV1R6) SUB(BCP).	
APAR(AA06416) FMID(HBB7703) FIX(UA11759) UPG(ZOSV1R6) SUB(BCP).	
APAR(AA07502) FMID(HBB7703) FIX(UA12344) UPG(ZOSV1R6) SUB(BCP/1).	
APAR(AA08248) FMID(HBB7703) FIX(UA13595) UPG(ZOSV1R6) SUB(BCP).	
APAR(AA09066) FMID(JBB77K7) FIX(UA16078) UPG(ZOSV1R6) SUB(BCP).	
/* end of PSP extract file */	
9 4/27/2006	© 2006 IBM Corporation
4/2/1/2000	e 2000 ibin corporation

As stated earlier, the main purpose of extract files are as a feed to Host Compare program. However, there are several pieces of information you may find useful at times.

The second line contains the Preventive Service Planning Upgrade and Subset.

•In this case, the base subset BCP for Upgrade ZOSV1R6 has an extension subset BCP/1. This extract file contains the APAR/PTF references that are within both subsets.

•If this were a file for a FUNCTION bucket, an Upgrade of FUNCTION and a subset that contains the functional keyword would be used. Please remember that there is no RETAIN Upgrade and Subset for these files.

•The direct ftp site and file name are in the Header. This can be useful for subsequent automation of update processing by using ftp on the host to directly download the files.

•Each APAR/PTF line includes the Upgrade and Subset that referenced it. It is provided in the Report, in case you processes multiple Preventive Service Planning extract files together, to clearly identify the reason the APAR/PTF is in the report. A trailer line is included so you can ensure the file was received in its entirety.



There are two Web sites associated with this tool.

First is the main Web site, which is used to view HTML versions of the Preventive Service Planning subsets and acquire Extract Files if the exact Upgrade and Subset is not known. On the top of this Web site, you can find the HTML and/or extract files for ALL z/OS platform subsets by entering search terms with or without adding other search criteria, such as Upgrade, Hardware device name, subset name, FMID, Component Id or Program ID.

The bottom section of the page allows selection for key subsets by drop down selections. The key subsets include base components of z/OS, the latest hardware supported by z/OS, key subsets in major z/OS applications (CICS<sup>®</sup>, IMS<sup>™</sup>, DB2<sup>®</sup>, MQSeries<sup>®</sup>, WebSphere<sup>®</sup>) and Functions. The drop downs have selections for type (z/OS, Processors, Storage, Database Products, "FUNCTION", Middleware Products), categories (selections within types) and Release (if applicable).

If you know the Upgrade and Subset Names for the subset, you can skip the Web and acquire it directly from the IBM external FTP page. Remember, if you have previously downloaded an extract file, the ftp site and extract file name is in the header so you will not have to navigate through the Graphical User Interface again.

A number of customers have asked if they can get a single file containing multiple selected extract files. As this time, the tool's graphical user interface does not have this capability. However, bypasses to this problem will be discussed later in the document. IBM has acknowledged the need for this requirement but cannot provide a commitment to if or when it might be made available.



The Host Compare Program is the heart of the reconcile process. It has two inputs: pointers to datasets containing extract file information and a pointer to the host systems CSI / target zone. Please note that there are several methods to run multiple extract files through the compare in a single pass; this will be discussed later in this document in the Tasks section.

The output is a report of service, which is applicable to a specific target zone that has not been applied or installed.

There is one issue to watch out for. Extract files may have multiple entries, multiple PTF/FMID pairs, for the same APAR so the same file can be used on any system. The Host Compare program ignores PTFs for FMIDs that are not within the target zone! Therefore if you have FMIDs for a particular function or device across multiple target zones, you will need to run the Host Compare tool against all these zones. This is because the Host Compare Program only examines a single zone at a time. APARs for some z/OS base components have different FMIDS for different releases, which may reside in different zones, or the device and functional buckets may encompass several FMIDs that may be in different zones.



Since we have covered an overview of the tool and its components, it is time to discuss the tasks required to install and run the tool.

First of all, the Host Compare Program needs to be downloaded and installed. This only has to be done once unless a new version of the program becomes available.

Then the extract files are downloaded.

After the JCL for the Host Compare Program is edited, the job can be executed.

After executing the Host Compare Program, the report can be examined to determine the next course of action for the missing service, such as researching and/or ordering/applying. Currently these follow-on actions will have to be performed with other IBM Service tools.



On the right hand side of the main Web site, there is a text box labeled "EPSPT Host Tool". It contains the links to the Download, Install & Use instructions.

Prior to Downloading, you have to accept the license. You will not be able to see the detailed download instructions from the Web site until the license has been accepted.

You can download the Host Compare Program directly to your host by using a batch job or via anonymous FTP. If you prefer to download to your workstation first and then upload to the Host, you can use the browser or anonymous FTP.



Once you have used one of the download methods to place a dataset containing the EPSPT Host Tool (attributes are RECFM=FB, LRECL=80, BLKSIZE=3120) on your z/OS Host system you must use the TSO RECEIVE command from your TSO session to convert the EPSPT program back into its load module format.

•From the TSO command line, issue RECEIVE INDSN('epspt.data.set') -- where 'epspt.data.set' is the name of the FixBlock dataset created in the previous step. The RECEIVE INDSN(...) command will generate these messages:

Dataset WES.EPSPT.LOAD from WES on PLPSC Members: EPSPT Enter restore parameters or 'DELETE' or 'END' +

The original attributes of WES.EPSPT.LOAD were RECFM=U, LRECL=0, and BLKSIZE=32760. You can either receive EPSPT into an existing PDS that has identical attributes or place it into a new PDS by itself. To place it into a new or existing PDS, reply to INMR906A with the PDS name and/or with a member name (i.e. DA(PACKLIB) or DA(LIB\_NAME(EPSPT)).



You can acquire extract files in several ways.

As described on the previous Web site page, if you do not know the name of the Preventive Service Planning Upgrade or Subset, use the two graphical user interfaces on the main web page. The upper interface can be used to search for extract files for all z/OS related Preventive Service Planning subsets. The lower interface has a drop selection for key subsets. However, when the graphical user interface is used the extract files will have to download to the PC and then uploaded to the Host. Please note that the interface will only allow you to download 1 extract file at a time to the PC.

If you do know the Upgrade and Subset name, you can acquire the file directly without using the graphical user interface. You can acquire directly from the external ftp site. A better method is to use the supplied JCL sample in the next few pages which acquires the extract file from the Host via FTP and executes the Host Compare Program.

There are some helpful hints to keep in mind. First of all, once you use the interface to find an extract file, you can use the ftp site and name in extract file header to acquire via the direct methods. Secondly, there are often times you want to check multiple subsets against your target zone. The Host Compare Program will accept multiple extract files as input. The most direct method is the JCL example within the next few pages which demonstrates how to acquire multiple files from the host and execute the compare in a single job. Also, keep in mind that the Service Recommendation lists for Functions can be found by searching for FUNCTION as an Upgrade, or selecting FUNCTION in the drop down selection window.



Once the EPSPT Host Compare Program is installed, you may need to utilize a STEPLIB, JOBLIB, TSOLIB or LNKLSTxx to make this dataset accessible on the system. Once the EPSPT program is in the normal module search list, any user can run the report tool.

SAMPLE JCL to run the EPSPT Host Tool is shown on the next 2 pages. Lower case text in the sample reflects data that must be modified. Please note a basic knowledge of JCL is assumed.

Please keep in mind the following hints:

The parameter passed to the tool is the target zone, not the Global zone! The Global zone is identified in the //SMPCSI statement.

There are 2 output datasets, OUTPUT and OUTPUTL. OUTPUT is where the report can be found. OUTPUTL is an output log, which is used to debug problems.

If you get "Target Zone Not Valid", compare the name in the JCL with the name in the SMP/E List Command (to ensure it exists and is spelled correctly)

SET BDY(GLOBAL) LIST GLOBALZONE

IBM Education Assistant	IBM
JCL for Executing the Host Compare Program	
//jobname JOB	
//*************************************	
//* SMP/E: RUN PSP COMPARE AND REPORT TOOL	
//*************************************	
//stepname EXEC PGM=EPSPT,PARM='zonename'	
//STEPLIB DD DSN= <b>epspt.load.lib</b> ,DISP=SHR	
//SMPCSI DD DSN= <b>smpe.csi.dsname</b> ,DISP=SHR	
//SYSIN DD DSN=list_of_service.dataset,DISP=SHR	
//OUTPUT DD SYSOUT=*	
//*OUTPUT DD DSN=output.report.dataset,DISP=(NEW,CATLG,DELETE),	
//* SPACE=(TRK,(100,10)),	
<pre>//* DCB=(RECFM=FB,LRECL=80,BLKSIZE=160)</pre>	
//OUTPUTL DD SYSOUT=*	
//*OUTPUTL DD DSN=output.log.dataset,DISP=(NEW,CATLG,DELETE),	
<pre>//* SPACE=(TRK,(100,10)), //* DCB=(RECFM=FB,LRECL=80,BLKSIZE=160)</pre>	
//SYSPRINT DD *	
/*	
17 4/27/2006 © 2006 IBI	A Corporation

Please edit the following EXEC statement parameters:

Replace "zonename" in the sample with the zone to check.

Note: Do not use the Global zone!!

DD Statements: DDNames SYSIN, OUTPUT, OUTPUTL and SYSPRINT are required.

SMPCSI statement: This DD defines the SMP/E CSI dataset.

Replace "smpe.csi.dsname" in the sample with the name of the SMP/E CSI dataset.

SYSIN statement: This DD defines the dataset containing the list of required service. The format of the dataset is: APAR(APAR-number) FMID(FMIDxxx) FIX(PTF-number).

OUTPUT statement: This DD defines the dataset to contain the summary report.

This report will identify any service contained in the list that is NOT installed in the specified target zone. This may be either an explicit dataset or the default output (SYSOUT=\*).

OUTPUTL statement: This DD defines the dataset to contain the output log. The log file contains the details of which FMIDs were found and not found from the input file, and for found FMIDs the results that appear in the summary report.

This may be either in explicit dataset or the default output (SYSOUT=\*).

SYSPRINT statement: This DD defines the dataset to contain the job output.



This example has similar variables as the prior page.

However, it combines acquiring the current extract files directly from the ftp site and executing the host compare program. It has several "get with replace" statements to acquire the files as well as associated lines in the SYSIN statement. These lines are highlighted in the example.

To do this, you will have to know the names of the Upgrade and Subsets. Remember, there are several ways to determine the name of the file if you do not know it: for instance, searching from the Graphical User Interface or looking within the header of a previously uploaded extract file.

BN	I Educatio	n Assistant				IBM
Review	ving th	1e Rep	<b>Ort</b>	8/17		
For targe	t zone TO	JTZ17				
HOLD	APAR	-RESOLVING	G SYSMOD-	RELEVANT		
FMID	NUMBER	NAME	RECEIVED	UPGRADE+SUBSET		
нвв7720	AA13366	 UA23594	No	ZOSV1R7_BCP		
HBB7720	AA13724	UA23816	No	ZOSV1R7 BCP		
HBB7720	AA14101	UA23851	No	ZOSV1R7_BCP		
HBB7720	AA14302	UA23930	No	ZOSV1R7_BCP		
HBB7720	AA14320	UA23746	No	ZOSV1R7_BCP		
HBB7720	AA14424	UA23901	No	ZOSV1R7_BCP		
HBB7720	AA14514	UA23940	No	ZOSV1R7_BCP		
HBB7720	AA14686	UA24043	No	ZOSV1R7_BCP		
HBB7720	AA14830	UA23982	No	ZOSV1R7_BCP		
HRF7720	AA14469	UA23699	No	ZOSV1R7_RACF		
NOTE: An	asterisk	denotes an	APAR that	has been previously		
mentioned	in this	report.				
* * * * * * * * *	* * * * * * * * *	********	* * * * * * * * * * *	* * * * * * * * * * * * * * * * * * * *		
*		SU	JMMARY	*		
*******	* * * * * * * * *	*******	*******	* * * * * * * * * * * * * * * * * * * *		
FMIDs ap	plicable:	: 8				
APARs ap	plied:	182				
APARs re	quired:	10				
PTFs re	ceived:	0				
19				4/27/2006	© 2006 IBM C	

This is an example of the generated Report.

At the end of the report is the Summary, which has the number of APARs in the extract files that have already been applied to the target zone as well as the number of APARs/PTFs that still need to be applied.

The details for the missing service are on the upper portion of the report, include the FMID, the APAR number, the Resolving Name or PTF Number and the associated Upgrade and Subset Name. This should give you the information that you require to research, order or apply the missing service.

For the Upgrade and Subset field, please note the following: If the subset is an extension subset, the extension subset name will used even though the base subset is used in the extract file name.

Secondly, if the service is related to a Service Recommendation list for a Function, the Upgrade will be FUNCTION and the subset will be the keyword. Also remember that Functions do not have an underlying Preventive Service Planning subset, so if you want to research missing APARs, you will have to research by APAR or PTF number.

Some other items of note in the report are the target zone name on line 2 and the version, release, modification level of the Host Compare Program on

line 1.



The presentation should have demonstrated how the Enhanced Preventive Service Planning Tool (EPSPT) may save you time and effort during the Preventive Service process, by help you to quickly locate Preventive Service Planning information and by quickly determine what associated service is not on your system.

You also should also have learned about the new "Service Recommendations for Functions" process, how these lists are different from traditional Preventive Service Planning subsets and how to use the tool to reconcile service for these lists against your system.



Please let us know about any problems you experience with the tool or if you have suggestions for improvement.

The need for the tool and a number of major improvements, which have been implemented in the last several years, have been based on input like yours.

You can enter feedback via the link of the upper left hand corner of the main Web page.