

Install an SMP/E PTF with a web browser? Yes, with z/OSMF!

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z/OS Installation and Upgrade

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Session **2BG**

Place your
custom session
QR code here.
Please remove
the border and
text beforehand.



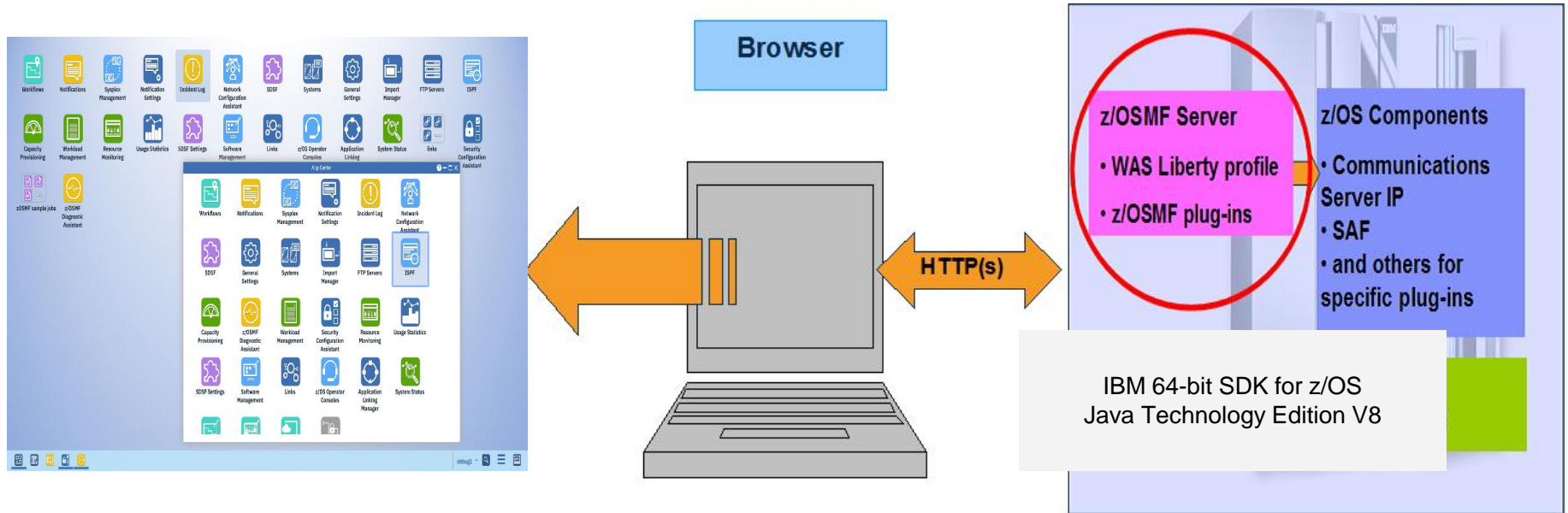
Thank you to Kurt Quackenbush, z/OSMF Software Management and SMP/E, for contributions.

Agenda

- z/OSMF overview
- z/OSMF Software Management and Software Update for install
- Intended users
- Set up
- z/OSMF Software Instance
- Use Cases:
 - Install corrective updates
 - Install recommended updates
 - Install functional updates
- Additional features



Overview z/OSMF



z/OS Management Facility provides a web interface to provide z/OS management applications

- Also, Provides RESTful services for z/OSMF and z/OS resources.

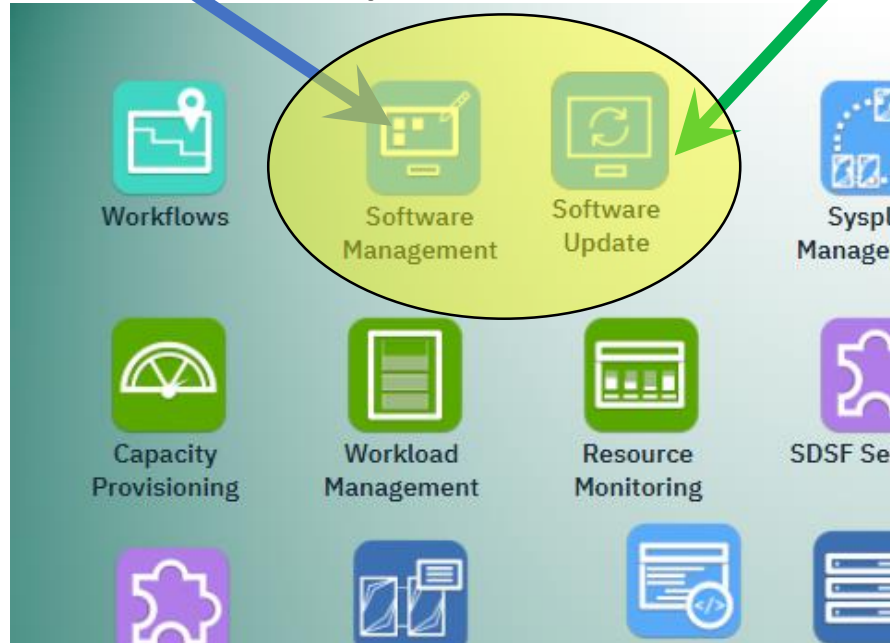
Delivered in the z/OS V2.2 base, and automatically started in V2.3

z/OSMF Software Management

z/OSMF Software Update

Product(s)

- Packaged as:
 - IBM = ServerPac as a Portable Software Instance (PSI)
 - ISVs = Portable Software Instance
- Required to install a PSI.
- Can also deploy previous installed packages (Software Instances)
- SMP/E, or non-SMP/E, or both.
- Non-SMP/E packaged PSIs can be updated using this path (= product replace).
- Myriad of reports about products, service, and much more...



Fix(es)

- Only consumes SMP/E packaged PTFs
 - No PTF packaging changes necessary
- Supported use cases:
 - Corrective
 - Recommended
 - Functional
- Not required to be used to install SMP/E PTFs
 - Can still use traditional SMP/E batch job method (for RECEIVE, APPLY, ACCEPT)

Who is z/OSMF Software Update intended for?

The less experienced z/OS installer

- Needs help from a more experienced installer, when installation exceptions occur.
- Wants a simple interface that is easy to use, and be guided through the process of installing fixes correctly.
- Isn't **as** familiar with z/OS-specific terms, JCL, or the intricacies of SMP/E, but is learning.



But wait! I've been installing SMP/E PTFs for decades! Can I use Software Update too?

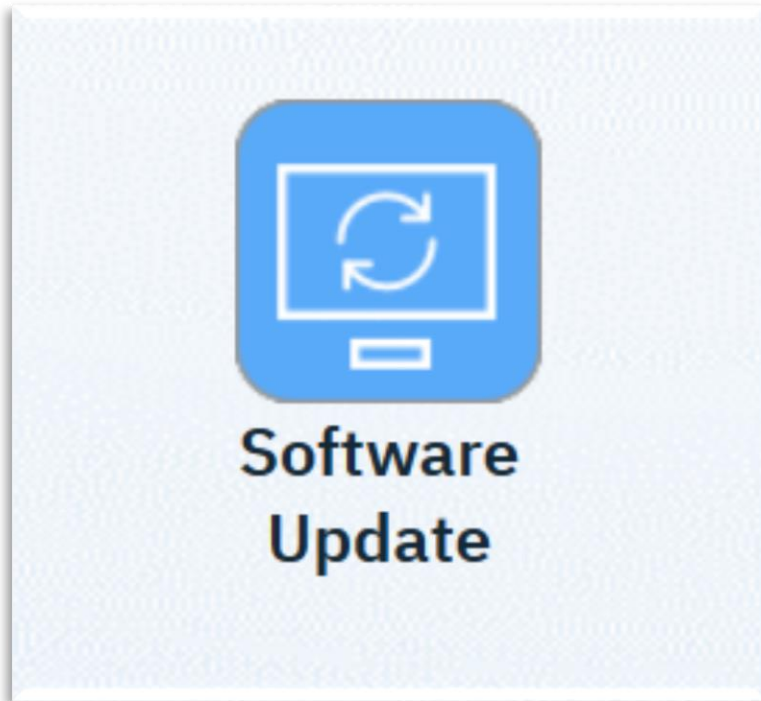
Of course you can!

- The interface provides a nice capability for both types of users to see what is happening, and help each other.
- Make no mistake: you can still use SMP/E batch jobs to install SMP/E PTFs.
- The result is the same: PTFs will be put in target zones.
- It's just a matter on how you did that: via batch or z/OSMF.

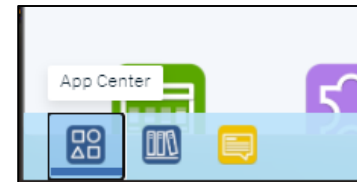


Software Update Setup

Software Update is a new function in the Software Management plug-in.



- ❑ Verify you have z/OSMF Software Management plug-in enabled in IZUPRMxx:
 - PLUGINS (SOFTWARE_MGMT)
- ❑ Install these PTFs
 - z/OS V2.4 UI72029
 - z/OS V2.3 UI72028
- ❑ Check your IKJTSOxx parmlib member:
 - AUTHPGM NAMES (GIMSMP)
 - Software Update runs from a TSO/E address space started from z/OSMF.
- ❑ Set up access:
 - Permit read access to `IZUDFLT.ZOSMF.SOFTWARE_DEPLOYMENT.SOFTWARE_MANAGEMENT.SWUPDATE` in class `ZMFAPLA`.
- ❑ Launch away, after restarting the server!
 - Check in your App Folder (lower left) on Desktop if you don't see it.

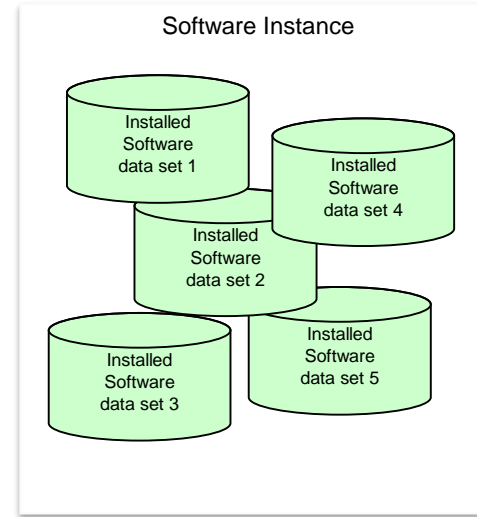
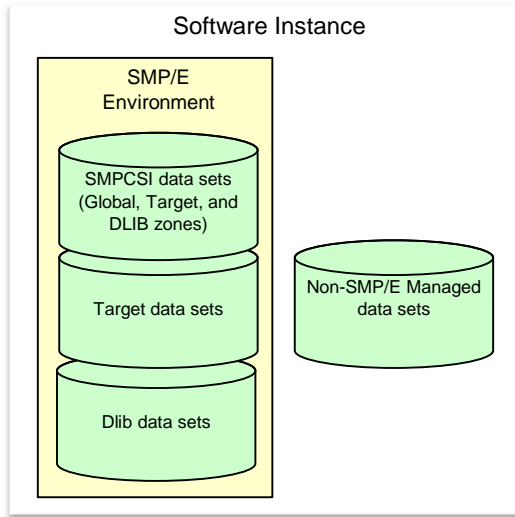


What is a Software Instance?

Software Update operates on a Software Instance, so you need to have those on your system



What is a Software Instance?

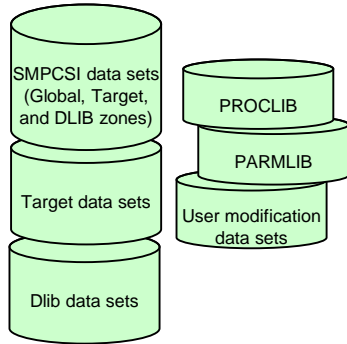


A software instance (SWI):

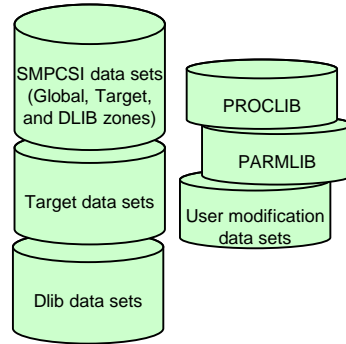
- Describes a deployable unit of installed software.
- Is a collection of data sets containing installed software
 - Sequential, PDS(E), VSAM, zFS, HFS.
- May include SMP/E managed target and distribution libraries, as well as the global, target, and distribution zone SMPCSI data sets.

Examples of Software Instances

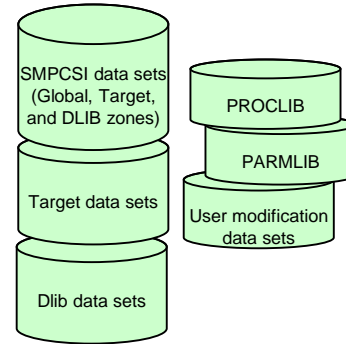
IBM, z/OS V2.4 1Q20
Software Instance



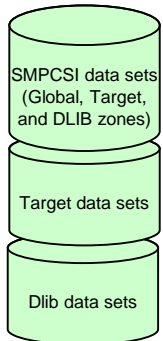
IBM, z/OS V2.3 4Q19
Software Instance



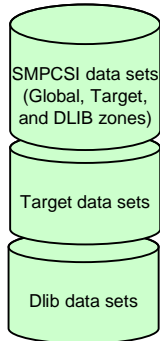
IBM, z/OS V2.3 3Q19
Software Instance



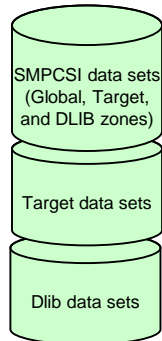
Db2 V12 1Q20
Software Instance



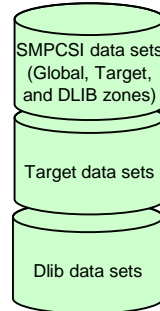
Db2 V12 3Q19
Software Instance



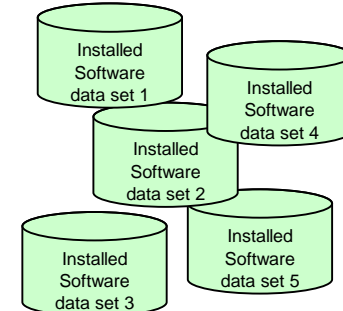
CICS V5.5 4Q19
Software Instance



Acme, Anvil
Manager V2 3Q19
Software Instance



Coyote, Instant Hole V5.2 3Q19
Software Instance

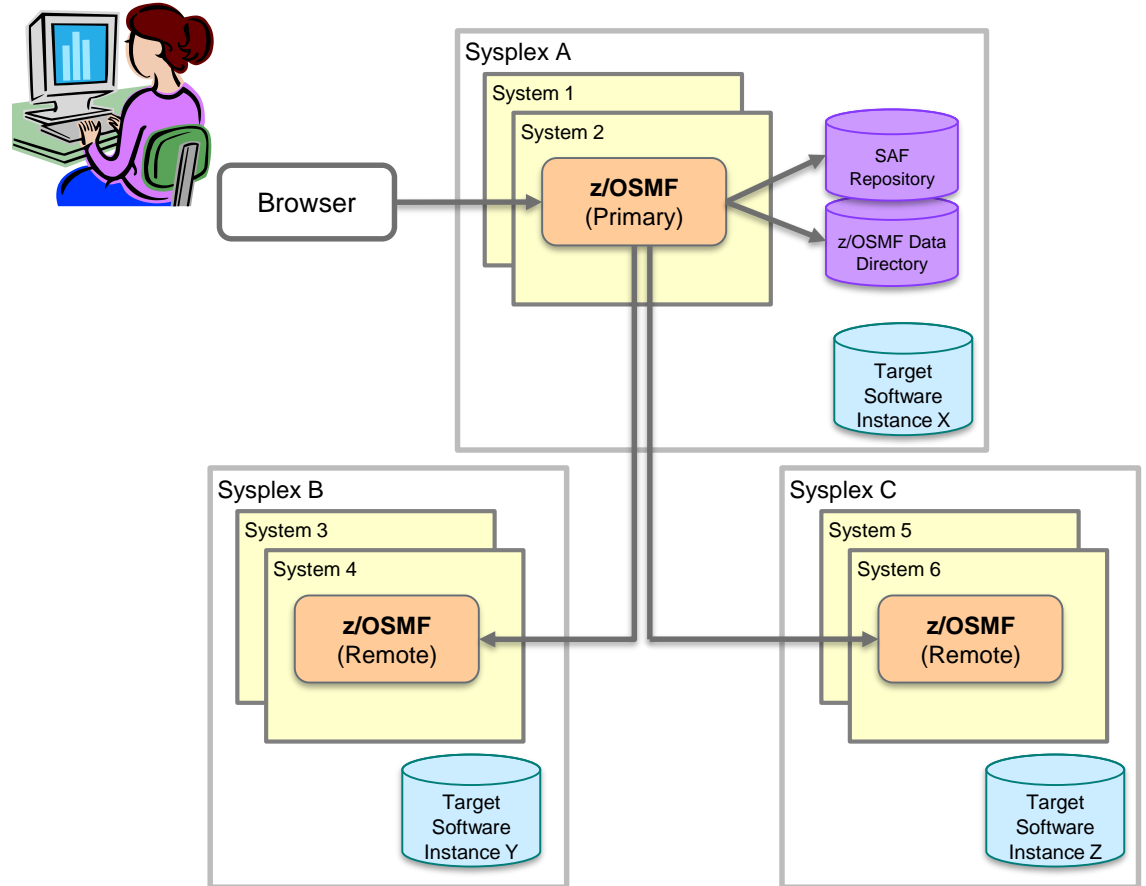


z/OSMF Software Update Topology

The **primary** z/OSMF server communicates with the **remote** z/OSMF servers.

A software instance is accessible to the z/OSMF server in its sysplex.

Therefore, Software Update can operate on “remote” Software Instances.



How to define a Software Instance



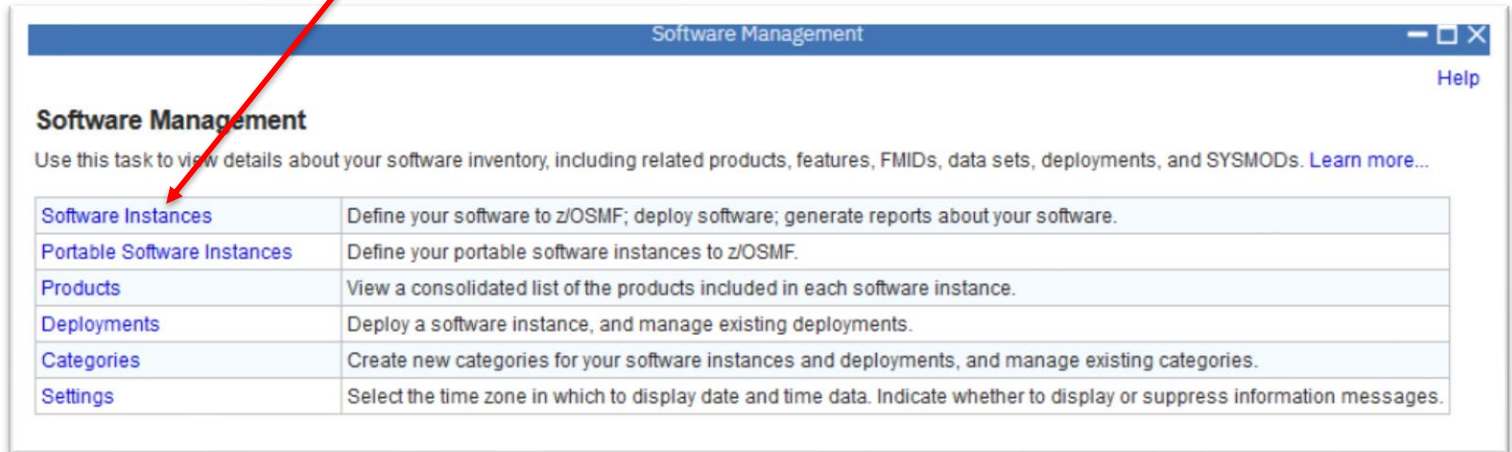
Two methods to define a software instance for **existing installed software**:

1. Interactively in the Software Management task.
2. Programmatically using the Add Software Instance REST API.

Or, install **new software** with a Portable Software Instance from a software provider.

How to define a Software Instance Interactively in Software Management...

On the Software Management primary page, click “Software Instances”



Software Management

Help

Software Management

Use this task to view details about your software inventory, including related products, features, FMIDs, data sets, deployments, and SYSMODs. [Learn more...](#)

Software Instances	Define your software to z/OSMF; deploy software; generate reports about your software.
Portable Software Instances	Define your portable software instances to z/OSMF.
Products	View a consolidated list of the products included in each software instance.
Deployments	Deploy a software instance, and manage existing deployments.
Categories	Create new categories for your software instances and deployments, and manage existing categories.
Settings	Select the time zone in which to display date and time data. Indicate whether to display or suppress information messages.

How to define a Software Instance Interactively in Software Management...

On the Software Instances page, click Actions → Add.

The screenshot shows the 'Software Management' application window. The breadcrumb navigation indicates 'Software Management > Software Instances'. The page title is 'Software Instances'. There is a 'Switch To:' dropdown menu in the top right. An 'Actions' dropdown menu is open, with 'Add...' highlighted. A red arrow points from the text on the left to the 'Add...' option. The main content area contains a table with columns: 'Description Filter', 'Activity Filter', 'Global Zone CSI Filter', and 'Target Zones Filter'. The table has two rows of data.

Description Filter	Activity Filter	Global Zone CSI Filter	Target Zones Filter
dataset provider properties	Being deployed Being exported	IBMUSRA.SW4WF.GLOBAL.CSI	TGT
		IBMUSR6.SW4SWU.CSI	TGT

How to define a Software Instance Interactively in Software Management...

In the Add Software Instance wizard

- Enter a name and optional description for the software instance
- Click “Next”

Software Management > Software Instances > Add Software Instance

Add Software Instance

Welcome

➔ **Name and Description**

System and Global Zone

Categories

Non-SMP/E Managed Data Sets

Products and Features

Summary

Name and Description

Enter the name and description of the software instance.

* Name:

Description: (maximum 256 characters, currently 35 characters)

How to define a Software Instance Interactively in Software Management...

- Select the z/OSMF host system where the software resides. (refer to the topology page).
- Enter the global zone CSI data set name
 - With typeahead!
- Click “Next”

Software Management > Software Instances > Add Software Instance

Add Software Instance

Welcome

✓ Name and Description

➔ System and Global Zone

Categories

Non-SMP/E Managed Data Sets

Products and Features

Summary

System and Global Zone

Select the system and the global zone CSI associated with the product set

* System:

AQFT

* Global Zone CSI ([Learn more...](#)):

MWALLE.IMS152B.CSI

How to define a Software Instance Interactively in Software Management...

- Select one or more target zones.
- Click “Finish” (or click Next to add into a Category, or non-SMP/E data sets, ..)

Software Management > Software Instances > Add Software Instance

Add Software Instance

Welcome

✓ Name and Description

✓ System and Global Zone

➔ Target Zones

Categories

Non-SMP/E Managed Data Sets

Products and Features

Summary

Target Zones

Select the target zones that describe the target libraries associated with the product set.

Target Zones

Actions

No filter applied

<input type="checkbox"/>	Name Filter	Description Filter	Messages Filter	Related DLIB Zone Filter	CSI Data Set Filter
<input type="checkbox"/>	IMS151T			IMS151D	MWALLE.IMSCPAC.SMPE2.IMS.TARGET.CSI

How to define a Software Instance Interactively in Software Management...

That's it! The software instance is now defined and ready for action.

Software Management > Software Instances

Software Instances

Messages 0 0 1

The product, feature, and FMID information for software instance "IMS_V15_RSU2020" on system "AQFT" was retrieved. IZUD164

Actions ▾

22 of 62 items shown. [Clear filter](#)

<input type="checkbox"/>	Name Filter	System Filter	Messages Filter	Description Filter	Activity Filter	Global Zone CSI Filter	Target Zones Filter	Categories contains "PSI_Examples" Filter	Product, Feature, and FMID Information Retrieved (Local) Filter
<input type="checkbox"/>	IMS_V15_RSU2020	AQFT		IMS V15, at service level RSU 2009.		MWALLE.IMS152B.CSI	IMS151T	IMS_PSI	Oct 31, 2020, 7:29:15 PM

What exactly is a software update?



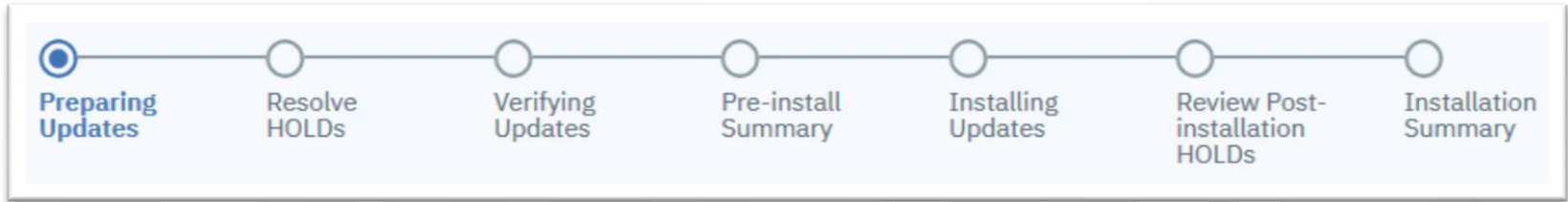
A **software update** is a generic term for an SMP/E PTF.

(Remember why we use more generic terms - for the intended user!)

Three actions for installing software updates with z/OSMF. You pick:

1. **Corrective**
 - Install updates to fix a specific problem.
 - Updates are identified by user specified name (ID).
2. **Recommended**
 - Install vendor recommended updates.
 - Updates are identified by vendor defined source IDs.
3. **Functional**
 - Install updates to support new function.
 - Updates are identified by selected fix categories.

Software Update process steps for all kinds of updates

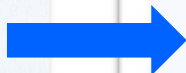
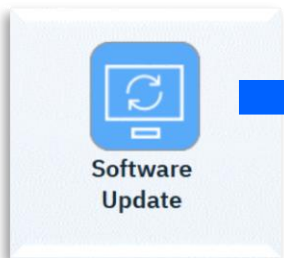


After identifying which kind of updates to install, Software Update guides the user through the following steps:

Step	Action
Preparing updates	z/OSMF performs APPLY CHECK to identify HOLDs to review and ensure no missing requisites
Resolve HOLDs	User reviews and resolves each HOLD, either bypass the HOLD or exclude the update
Verifying updates	z/OSMF performs APPLY CHECK to validate the HOLD resolution choices
Pre-installation summary	User reviews the list of updates that will be installed.
Installing updates	z/OSMF performs APPLY
Review post-installation HOLDs	User reviews any HOLDs that need action after the APPLY

Install Corrective Updates

z/OSMF Software Update main page



The list of Software Instances is displayed.

The screenshot shows the "Software Update" main page in a web browser. The page title is "Software Update" with a help icon. In the top right corner, there are links for "Settings" and "Help". Below the title, there are two buttons: "Start New Software Update" (highlighted in blue) and "View Updates in Progress". To the right of these buttons is a link "Show completed updates" with a plus icon. The main content area is titled "Software Instances and Zones" and includes the instruction "Choose a software instance and select a zone for a software update." Below this is a search bar. A table displays the software instances:

Name	System	Description	Status
> hooli	pev171		Being deployed
> swi4swu	pev171		Ready
> swi4swu2	pev171		Being updated
> swi4swu3	pev171		Ready

Below the table, there is a pagination control showing "Items per page: 10" and "1-4 of 4 items". At the bottom left, there is a "Refresh" button and the text "Last refresh: Sep 30, 2020 11:31:11 AM". At the bottom right, there are three buttons: "Install Corrective", "Install Recommended", and "Install Functional".

Install Corrective Updates

z/OSMF Software Update main page...

1. Select a software instance and the desired target zone to be updated.
2. Click “Install Corrective”

Install Corrective Updates

Identifying the software updates

- Enter the names for the updates (PTFs) you want to install.
- Click “Submit”

Software Update / Install Updates

Install Updates

Software Instance: swi4swu Zone: TGT

Enter Update Names ⓘ

ua00001 ua00002

Submit or Upload List (CSV, 500 kB max.)

Cancel

(you can upload a list if you want)

Install Corrective Updates

Identifying the software updates...

The global zone is analyzed to find the specified PTFs.

Software Update / Install Updates

Help

Install Updates

Software Instance	Zone
swi4swu	TGT

Enter Update Names

ua00001 ua00002 Submit or Upload List (CSV, 500 kB max.)

Working

Cancel

(Updates must be found (RECEIVED) in the global zones. More on that later...)

Install Corrective Updates

Identifying the software updates

- The updates are found in the global zone and they are ready to be installed.
- Click “Install selected”.

The screenshot displays the 'Install Updates' page in a software update management tool. The page title is 'Install Updates' and the breadcrumb is 'Software Update / Install Updates'. The 'Software Instance' is 'swi4swu' and the 'Zone' is 'TGT'. The search results show two updates: 'UA00001' and 'UA00002', both with a status of 'Ready'. A red arrow points to the 'Install selected' button, which is highlighted in blue. The interface also includes a 'Submit' button, an 'Upload List' button (with a note '(CSV, 500 kB max.)'), and a 'Cancel' button at the bottom right.

Update Name	Status
UA00001	Ready
UA00002	Ready

Install Corrective Updates

→ Preparing Updates

- The overview across the top indicates the current step in the process.
- A first pass APPLY CHECK identifies all relevant HOLDS and ensures requisites are found.

The screenshot shows a window titled "Software Update" with a progress bar at the top. The progress bar has seven steps: "Preparing Updates" (selected with a blue circle), "Resolve HOLDS", "Verifying Updates", "Pre-install Summary", "Installing Updates", "Review Post-installation HOLDS", and "Installation Summary". Below the progress bar is a table with three columns: "Software Instance", "Zone", and "Notes". The table contains one row with the instance "swi4swu", zone "TGT", and a note "Use a maximum of 140 characters per note." with an "Edit Notes" button. Below the table is another table with two columns: "Process" and "Status". The "Process" column contains "Preparing Updates" and the "Status" column contains a radio button labeled "Working". At the bottom right of the window are three buttons: "Cancel", "Save and Exit", and "Next".

Software Instance	Zone	Notes
swi4swu	TGT	Use a maximum of 140 characters per note. Edit Notes

Process	Status
Preparing Updates	<input type="radio"/> Working

Install Corrective Updates

→ Preparing Updates

What is happening within z/OSMF Software Update

```
APPLY  
SELECT (UA00001, UA00002)  
GROUPEXTEND  
BYPASS (HOLDSYSTEM)  
CHECK.
```

- The **Install Corrective** action uses GROUPEXTEND on the APPLY.
- Ensures requisite updates are also installed.

Install Corrective Updates

→ Preparing Updates

- APPLY CHECK completed.
- HOLDS that must be resolved are found in the APPLY CHECK results.
- Click “Next”

Software Update

Preparing Updates

Help ?

Progress: Preparing Updates (selected), Resolve HOLDS, Verifying Updates, Pre-install Summary, Installing Updates, Review Post-installation HOLDS, Installation Summary

Software Instance	Zone	Notes
swi4swu	TGT	Use a maximum of 140 characters per note. Edit Notes

Process	Status
Preparing Updates	New HOLDS Found

[Cancel](#) [Save and Exit](#) [Next](#)

Install Corrective Updates

→ Resolve HOLDS

- HOLDS are presented for review and resolution.
- You can filter the view by HOLD Type or Reason

Software Update

Resolve HOLDS

Help

Preparing Updates **Resolve HOLDS** Verifying Updates Pre-install Summary Installing Updates Review Post-installation HOLDS Installation Summary

Software Instance	Zone	Notes
swi4swu	TGT	Use a maximum of 140 characters per note. Edit Notes

Unresolved (3) Resolved (0) Resolve after Installation (0) Excluded (0)

Filter by Type
 ERROR (0) SYSTEM (3) FIXCAT (0) USER (0)

Filter by Reason
 IPL (2) DOC (1)

Reset all filters [↻](#)

Export [↓](#)

<input type="checkbox"/>	Type	Reason	FMID	Update Name
> <input type="checkbox"/>	SYSTEM	IPL	HSWUPD1	UA00001
> <input type="checkbox"/>	SYSTEM	DOC	HSWUPD1	UA00001
> <input type="checkbox"/>	SYSTEM	IPL	HSWUPD1	UA00002

Cancel Save and Exit Next

Install Corrective Updates

→ Resolve HOLDS

What your action means:

Resolve HOLD:

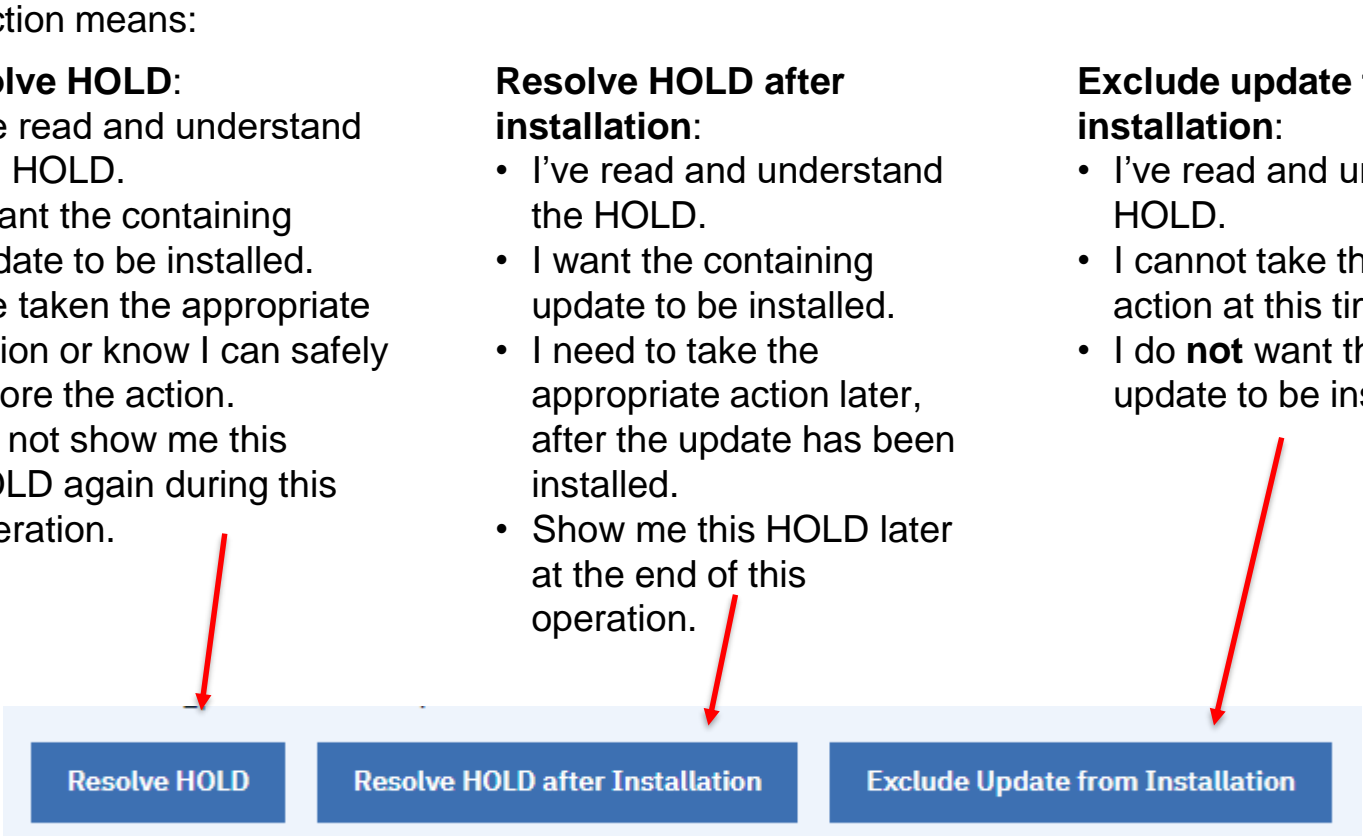
- I've read and understand the HOLD.
- I want the containing update to be installed.
- I've taken the appropriate action or know I can safely ignore the action.
- Do not show me this HOLD again during this operation.

Resolve HOLD after installation:

- I've read and understand the HOLD.
- I want the containing update to be installed.
- I need to take the appropriate action later, after the update has been installed.
- Show me this HOLD later at the end of this operation.

Exclude update from installation:

- I've read and understand the HOLD.
- I cannot take the appropriate action at this time.
- I do **not** want the containing update to be installed.



Resolve HOLD

Resolve HOLD after Installation

Exclude Update from Installation

Install Corrective Updates

→ Resolve HOLDS

- Resolve all unresolved HOLDS before continuing.
- HOLDS change state as they are resolved.

Software Update

Resolve HOLDS

Help

Progress: **Preparing Updates** (checked), **Resolve HOLDS** (active), Verifying Updates, Pre-install Summary, Installing Updates, Review Post-installation HOLDS, Installation Summary

Software Instance	Zone	Notes
swi4swu	TGT	Use a maximum of 140 characters per note. Edit Notes

Unresolved (1) | Resolved (2) | Resolve after Installation (0) | Excluded (0)

Filter by Type: ERROR (0) SYSTEM (1) FIXCAT (0) USER (0) IPL (0) DOC (1)

Filter by Reason: ERROR (0) SYSTEM (1) FIXCAT (0) USER (0) IPL (0) DOC (1)

Reset all filters

Export

Type	Reason	FMID	Update Name
> <input type="checkbox"/> SYSTEM	DOC	HSWUPD1	UA00001

Cancel | Save and Exit | Next

Install Corrective Updates

→ Resolve HOLDS

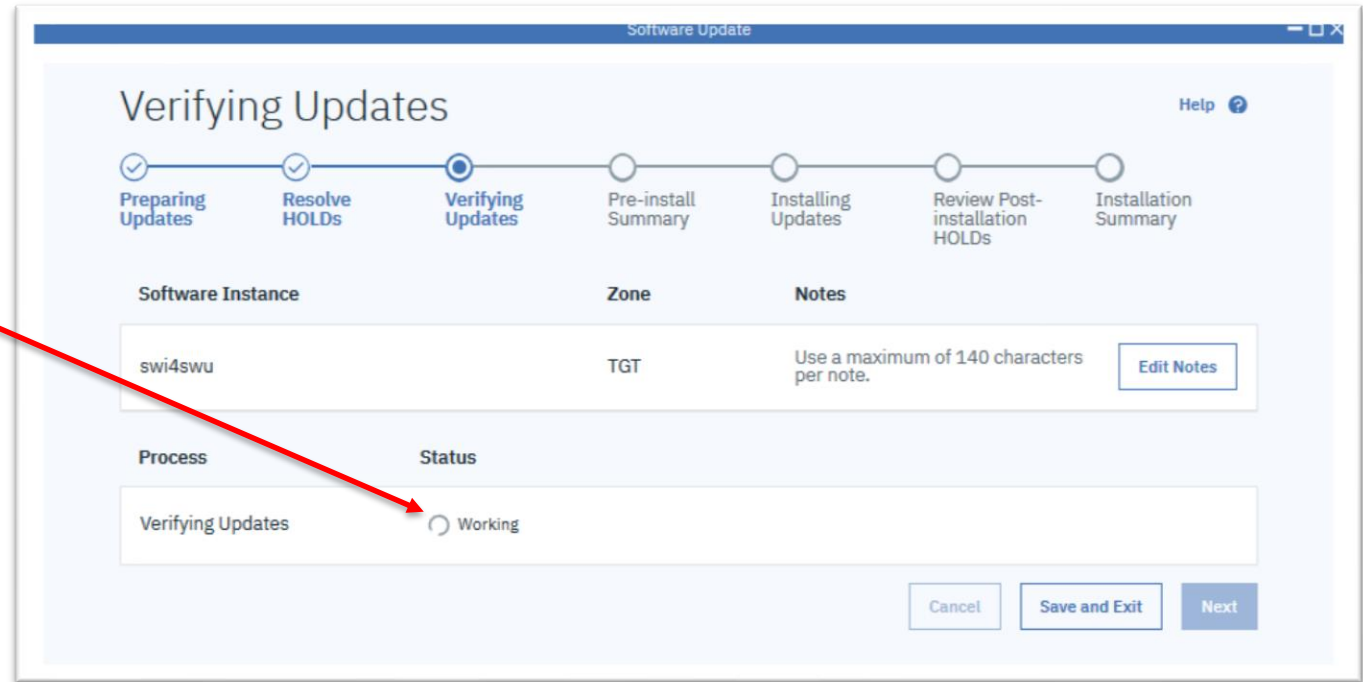
- Once all HOLDS are resolved.
- Click “Next”

The screenshot shows a 'Software Update' window with a progress bar at the top. The progress bar has seven steps: 'Preparing Updates' (checked), 'Resolve HOLDS' (active), 'Verifying Updates', 'Pre-install Summary', 'Installing Updates', 'Review Post-installation HOLDS', and 'Installation Summary'. Below the progress bar, there is a table with columns for 'Software Instance', 'Zone', and 'Notes'. The first row shows 'swi4swu' in the 'Software Instance' column, 'TGT' in the 'Zone' column, and a note: 'Use a maximum of 140 characters per note.' with an 'Edit Notes' button. Below the table, there are four filter tabs: 'Unresolved (0)', 'Resolved (3)', 'Resolve after Installation (0)', and 'Excluded (0)'. Under 'Filter by Type', there are checkboxes for 'ERROR (0)', 'SYSTEM (0)', 'FIXCAT (0)', and 'USER (0)'. Under 'Filter by Reason', there are checkboxes for 'IPL (0)' and 'DOC (0)'. There is a search bar and an 'Export' button. Below the filters, there is a table with columns: 'Type', 'Reason', 'FMID', and 'Update Name'. The table is empty, and a message says 'There are no HOLDS to display'. At the bottom right, there are three buttons: 'Cancel', 'Save and Exit', and 'Next'. A red arrow points from the 'Next' button in the screenshot to the 'Next' button in the list on the left.

Install Corrective Updates

→ Verifying Updates

- Performing APPLY CHECK to verify your HOLD resolution and update exclusion choices.



Install Corrective Updates

→ Verifying Updates

- APPLY CHECK is complete, all is well.
- Click “Next”.

Software Update

Verifying Updates

Help ?

Progress: ✓ Preparing Updates ✓ Resolve HOLDS ● Verifying Updates ○ Pre-install Summary ○ Installing Updates ○ Review Post-installation HOLDS ○ Installation Summary

Software Instance	Zone	Notes
swi4swu	TGT	Use a maximum of 140 characters per note. Edit Notes

Process	Status
Verifying Updates	✓ Done

[Cancel](#) [Save and Exit](#) [Next](#)

Install Corrective Updates

→ Pre-install Summary

- A summary of the updates to be installed is displayed.
- After reviewing the list of updates to be installed click “Next”.

Software Update

Pre-install Summary

Help ?

Preparing Updates Resolve HOLDs Verifying Updates **Pre-install Summary** Installing Updates Review Post-installation HOLDs Installation Summary

Software Instance	Zone	Notes
swi4swu	TGT	Use a maximum of 140 characters per note. Edit Notes

Updates to be installed

Export ↓

Filter by Installation Status

Will be installed (2) Excluded (0) Will be installed (satisfies dependencies) (0)

Search

Update Name	Installation Status
UA00001	Will be installed
UA00002	Will be installed

Items per page: 10 | 1-2 of 2 items 1 of 1 pages < 1 >

[Cancel](#) [Save and Exit](#) [Next](#)

Install Corrective Updates

→ Installing Updates

- Performing APPLY to install the updates.

Software Update

Installing Updates

Help ?

Progress: Preparing Updates (✓), Resolve HOLDS (✓), Verifying Updates (✓), Pre-install Summary (✓), **Installing Updates** (●), Review Post-installation HOLDS (○), Installation Summary (○)

Software Instance	Zone	Notes
swi4swu	TGT	Use a maximum of 140 characters per note. Edit Notes

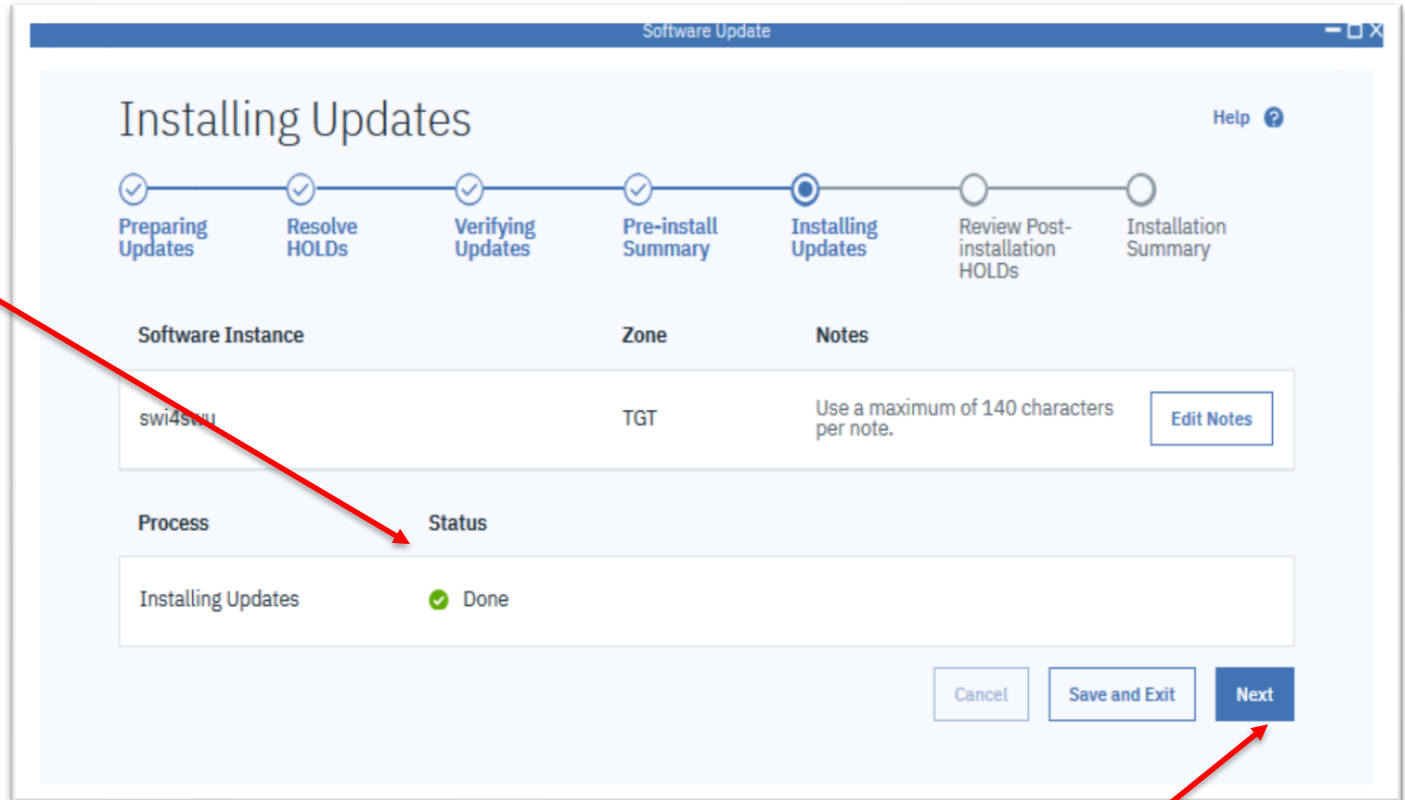
Process	Status
Installing Updates	Working

Buttons: Cancel, Save and Exit, Next

Install Corrective Updates

→ Installing Updates

- The APPLY is finished!
- Click “Next”.



Install Corrective Updates

→ Review Post-Installation HOLDS

- If there are HOLDS to be resolved after the install, review and resolve them now.
- Click “Next”.

The screenshot shows the 'Review Post-installation HOLDS' window in the Software Update utility. The window title is 'Software Update'. The main heading is 'Review Post-installation HOLDS' with a 'Help' icon. A progress bar at the top shows seven steps: 'Preparing Updates', 'Resolve HOLDS', 'Verifying Updates', 'Pre-install Summary', 'Installing Updates', 'Review Post-installation HOLDS' (which is the current step and highlighted with a blue circle), and 'Installation Summary'. Below the progress bar, there is a table with columns for 'Software Instance', 'Zone', and 'Notes'. The first row shows 'swi4swu' in the Software Instance column and 'TGT' in the Zone column. The Notes column contains the text 'Use a maximum of 140 characters per note.' and an 'Edit Notes' button. Below the table, there are two buttons: 'Unresolved (0)' and 'Resolved (0)'. There are also filter options: 'Filter by Type' with checkboxes for 'ERROR (0)', 'SYSTEM (0)', 'FIXCAT (0)', and 'USER (0)'; and 'Filter by Reason' with a 'Reset all filters' button. A search bar is present below the filters. At the bottom right, there are two buttons: 'Save and Exit' and 'Next'. A red arrow points to the 'Next' button.

Software Instance	Zone	Notes
swi4swu	TGT	Use a maximum of 140 characters per note.

Install Corrective Updates

→ Installation Summary

- The Software Update operation is now finished!
- SMP/E output and text files containing HOLDS can be downloaded.
- Click “Close”

Software Update

Installation Summary

Help ?

Progress: Preparing Updates, Resolve HOLDS, Verifying Updates, Pre-install Summary, Installing Updates, Review Post-installation HOLDS, **Installation Summary**

Software Instance	Zone	Status
swi4swu	TGT	Completed

Downloads

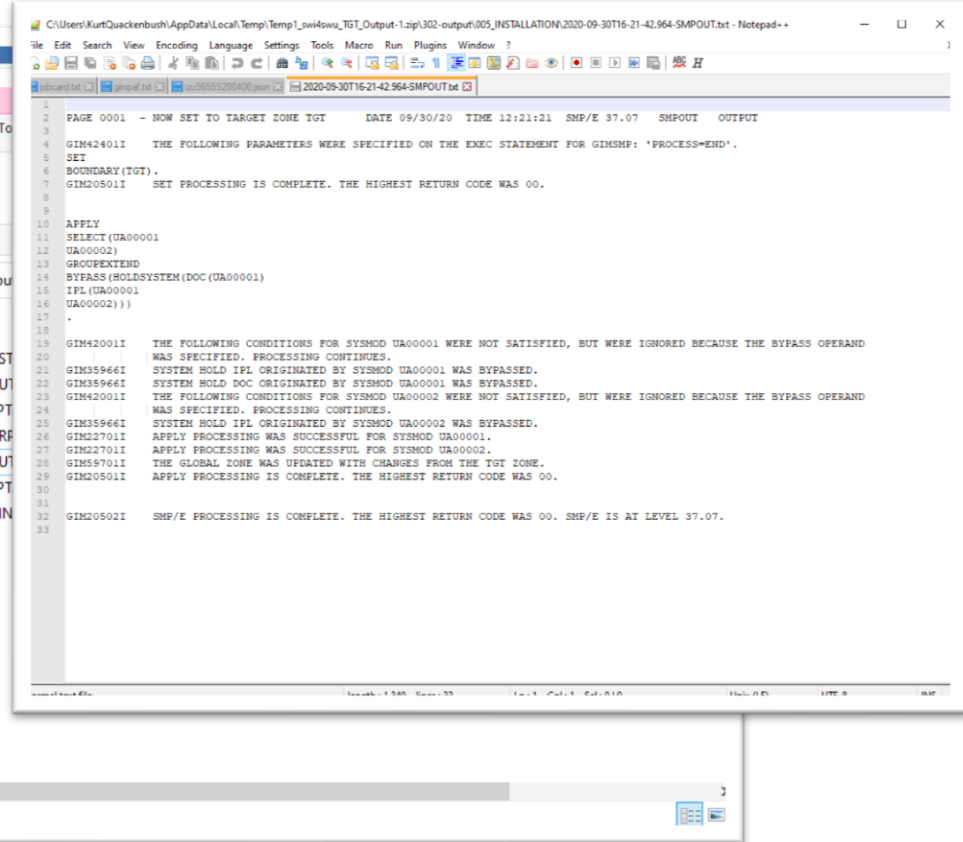
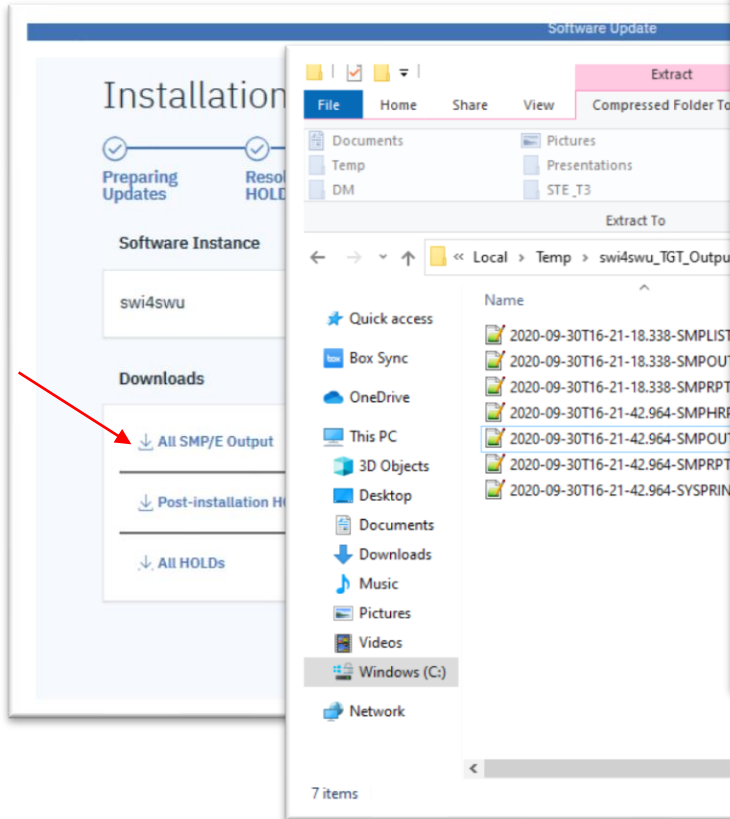
Downloads	File type
All SMP/E Output	ZIP
Post-installation HOLDS	TXT
All HOLDS	TXT

Close

Install Corrective Updates

→ Installation Summary

Click and a zip file is downloaded to your workstation.



Another update scenario: **Install Recommended**

The screenshot shows the 'Software Update' interface. At the top, there are buttons for 'Start New Software Update' and 'View Updates in Progress'. Below this is a section titled 'Software Instances and Zones' with a search bar and a table of instances. The table has columns for Name, System, Description, and Status. The instance 'swi4swu2' is selected, and its zone is 'TGT - Recommended updates were last installed on Aug 3, 2020 10:42:30 AM'. At the bottom, there are buttons for 'Refresh', 'Install Corrective', 'Install Recommended', and 'Install Functional'. A red arrow points to the 'Install Recommended' button.

Name ▲	System	Description	Status
> GuineaPigSWI	pev171		Ready
> deb_zos23	pev171		Being updated
> hooli	pev171		Being deployed
> smptest	pev171		Being deployed
> swi4swu	pev171		Ready
▼ swi4swu2	pev171		Ready
Zone			
<input checked="" type="radio"/> TGT - Recommended updates were last installed on Aug 3, 2020 10:42:30 AM			
> test	pev171		Ready

Items per page: 10 | 1-7 of 7 items

1 of 1 pages

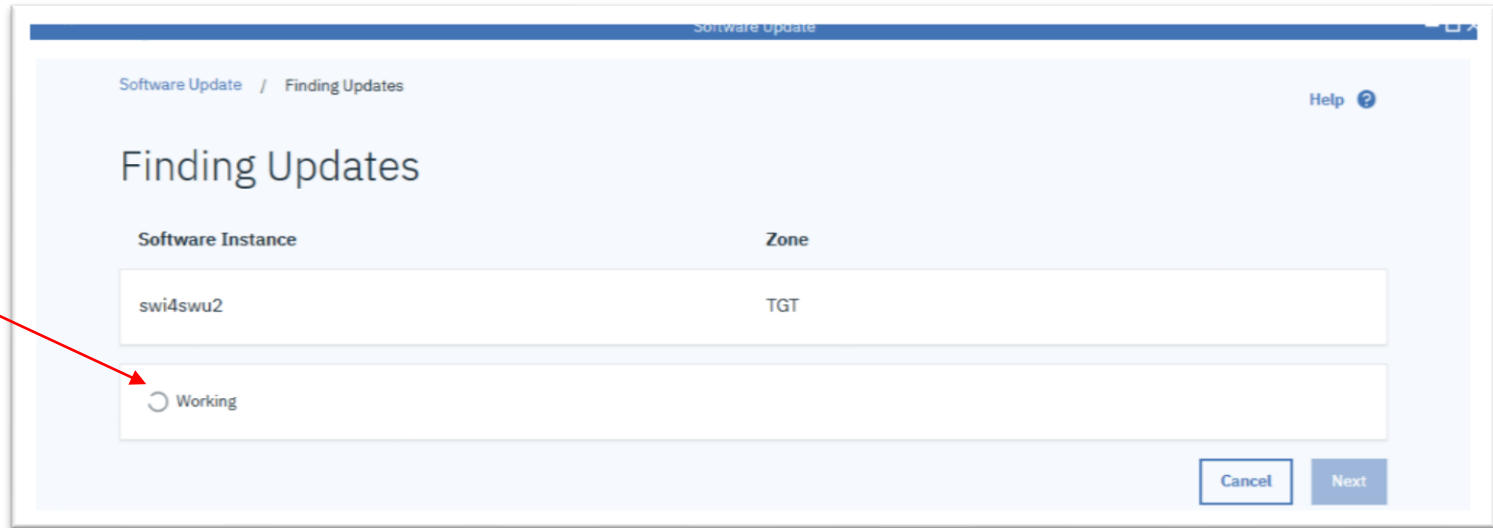
Refresh Last refresh: Aug 24, 2020 1:10:12 PM

Install Corrective Install Recommended Install Functional

Install vendor-recommended updates

Install Recommended Updates

Performing
APPLY CHECK
SOURCEID to
find
recommended
updates.



(Updates must be found (RECEIVED) in the global zones. More on that later...)

Install Recommended Updates

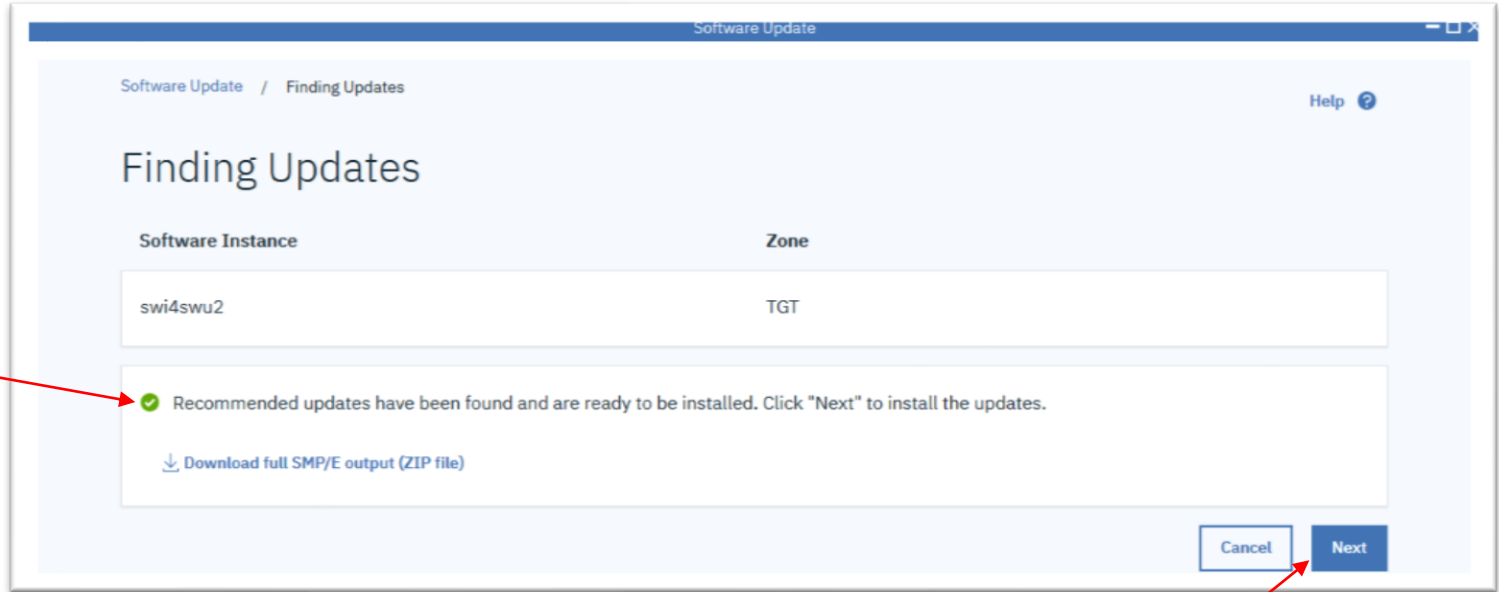
What is happening within z/OSMF Software Update

```
APPLY
SOURCEID(RSU*, HIPER, PRP, SECINT, CAR*, RSL*)
GROUP
BYPASS (HOLDUSER, HOLDSYSTEM, HOLDFIXCAT)
CHECK.
```

- Recommended updates are identified by vendor defined source IDs:
 - RSU*, HIPER, PRP, SECINT (IBM)
 - CAR*, HIPER, PRP (Broadcom)
 - RSL* (BMC)
- The list of source IDs is not user modifiable.
- Updates with an unresolved ERROR HOLD (PE PTFs) are **not** installed.
 - The ERROR HOLD is not displayed for the user to choose a resolution.
 - The PE PTF is **automatically** and **unconditionally** excluded.

Install Recommended Updates

One or more recommended PTFs were found and can be installed.

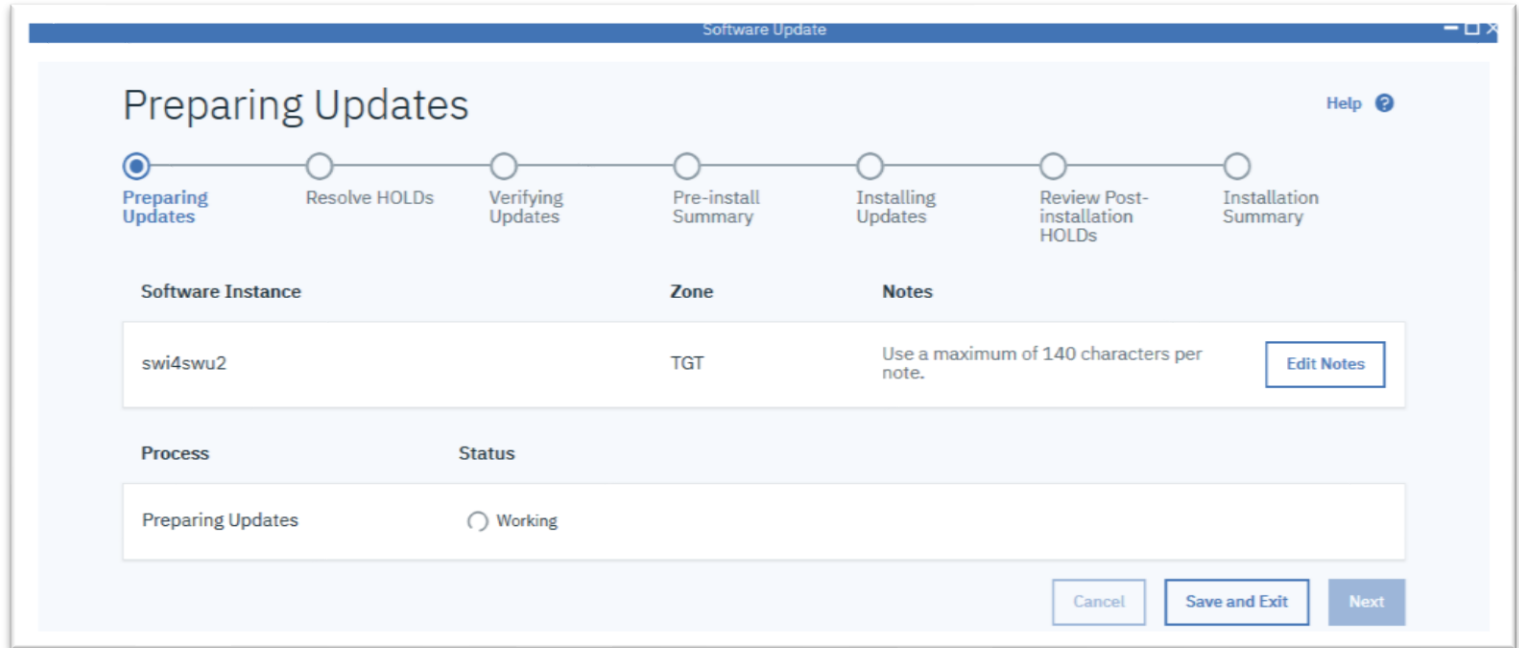


Click "Next" starts the update process.

Install Recommended Updates

→ Preparing Updates

Performing
APPLY
CHECK to
find missing
requisites
and
HOLDS.



...and continues on the same path as **Install Corrective** we've just seen...

Another update scenario: **Install Functional**

The screenshot shows the 'Software Update' interface. At the top, there are buttons for 'Start New Software Update' and 'View Updates in Progress'. Below this is the 'Software Instances and Zones' section, which includes a search bar and a table of instances. The table has columns for Name, System, Description, and Status. The instance 'swi4swu2' is selected, and its 'Zone' is 'TGT - Recommended updates were last installed on Aug 3, 2020 10:42:30 AM'. At the bottom, there are three buttons: 'Install Corrective', 'Install Recommended', and 'Install Functional'. A red arrow points to the 'Install Functional' button.

Name	System	Description	Status
> GuineaPigSWI	pev171		Ready
> deb_zos23	pev171		Being updated
> hooli	pev171		Being deployed
> smptest	pev171		Being deployed
> swi4swu	pev171		Ready
▼ swi4swu2	pev171		Ready
Zone			
● TGT - Recommended updates were last installed on Aug 3, 2020 10:42:30 AM			
> test	pev171		Ready

Items per page: 10 | 1-7 of 7 items

1 of 1 pages

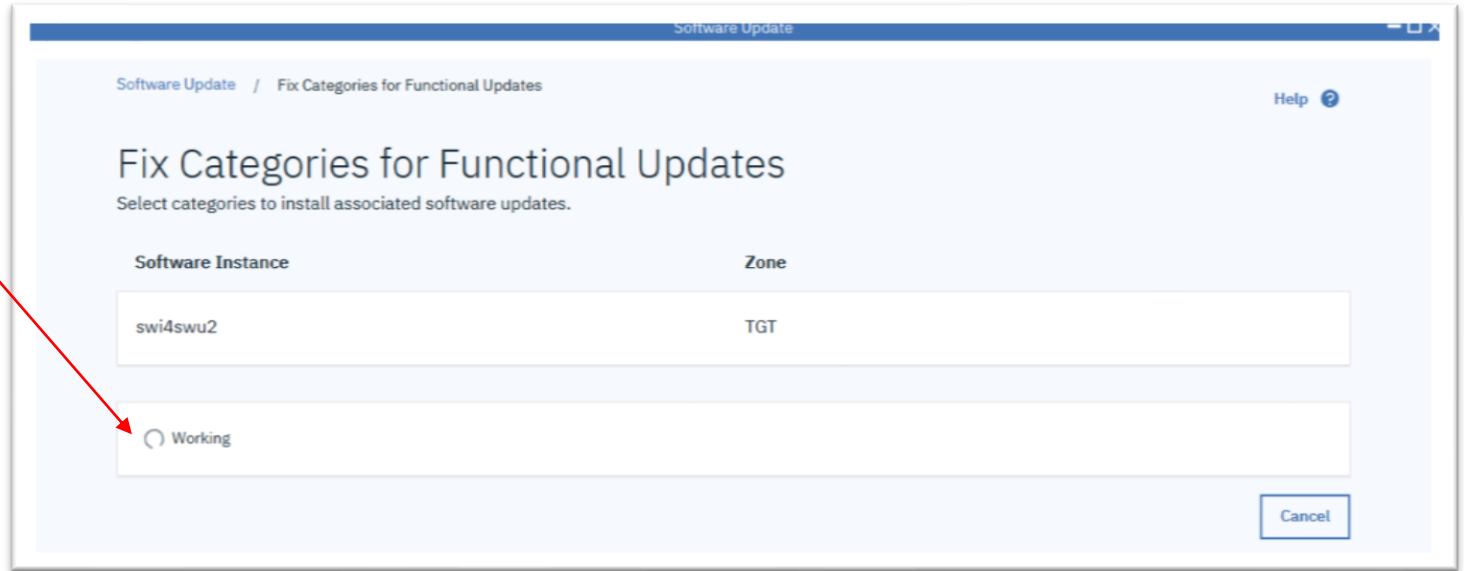
Refresh Last refresh: Aug 24, 2020 1:10:12 PM

Install Corrective Install Recommended **Install Functional**

Click to
install
updates
for
specific
functions
(FIXCATs)

Install Functional Updates

- Querying FIXCAT HOLDs to find missing updates.
- Just like SMP/E REPORT MISSINGFIX FIXCAT(*) processing.



(Updates must be found (RECEIVED) in the global zones. More on that later...)

Install Functional Updates

- Select the function updates (FIXCATs) you want to install
- Click “Install selected” starts the update process.
- All updates for the selected categories will be installed.

One or more fix categories were found with updates not yet installed.

Software Update

Software Update / Fix Categories for Functional Updates

Help ?

Fix Categories for Functional Updates

Select categories to install associated software updates.

Software Instance	Zone
swi4swu	TGT

Install selected ▶ 1 items selected Cancel

Fix Categories

- IBM.ProductInstall-RequiredService
- IBM.TargetSystem-RequiredService.z/OS.V2R4
- IBM.TestingExcludedStatus

Cancel

Install Functional Updates...

Performing
APPLY
CHECK to
find missing
requisites
and HOLDS.

Software Update

Preparing Updates

Help

Preparing Updates Resolve HOLDS Verifying Updates Pre-install Summary Installing Updates Review Post-installation HOLDS Installation Summary

Software Instance	Zone	Notes
swi4swu	TGT	Use a maximum of 140 characters per note. Edit Notes

Process	Status
Preparing Updates	<input type="radio"/> Working

[Cancel](#) [Save and Exit](#) [Next](#)

...and continues on the same path as **Install Corrective** and **Install Recommended** we've just seen...

Install Functional Updates...

What is happening within z/OSMF Software Update

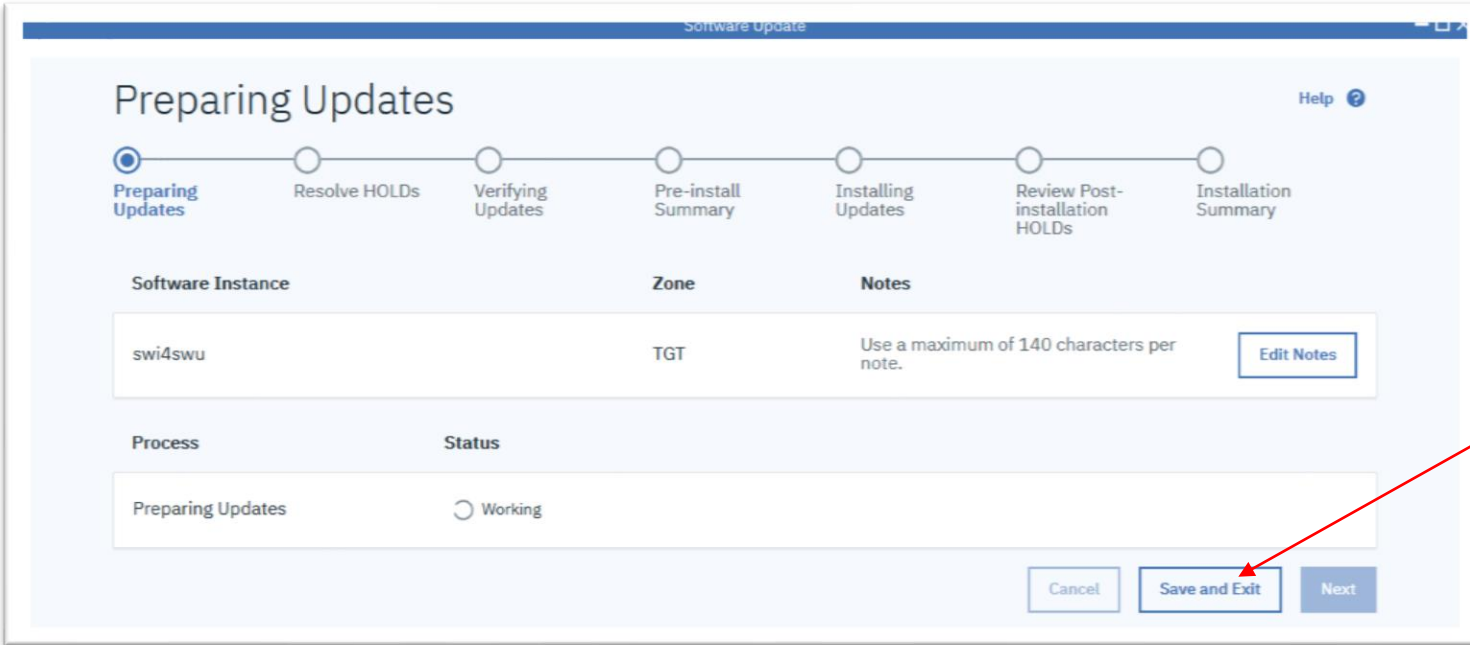
```
APPLY  
SOURCEID (IBM.PRODUCTINSTALL-REQUIREDSERVICE)  
GROUPEXTEND  
BYPASS (HOLDSYSTEM)  
CHECK.
```

- All PTFs with the selected Fix Category SOURCEID will be installed.
- GROUPEXTEND ensures requisite updates will also be installed.

- **Additional Features of z/OSMF Software Update**

- Save and Resume
- Completed and Cancelled
- Adding a description
- Settings

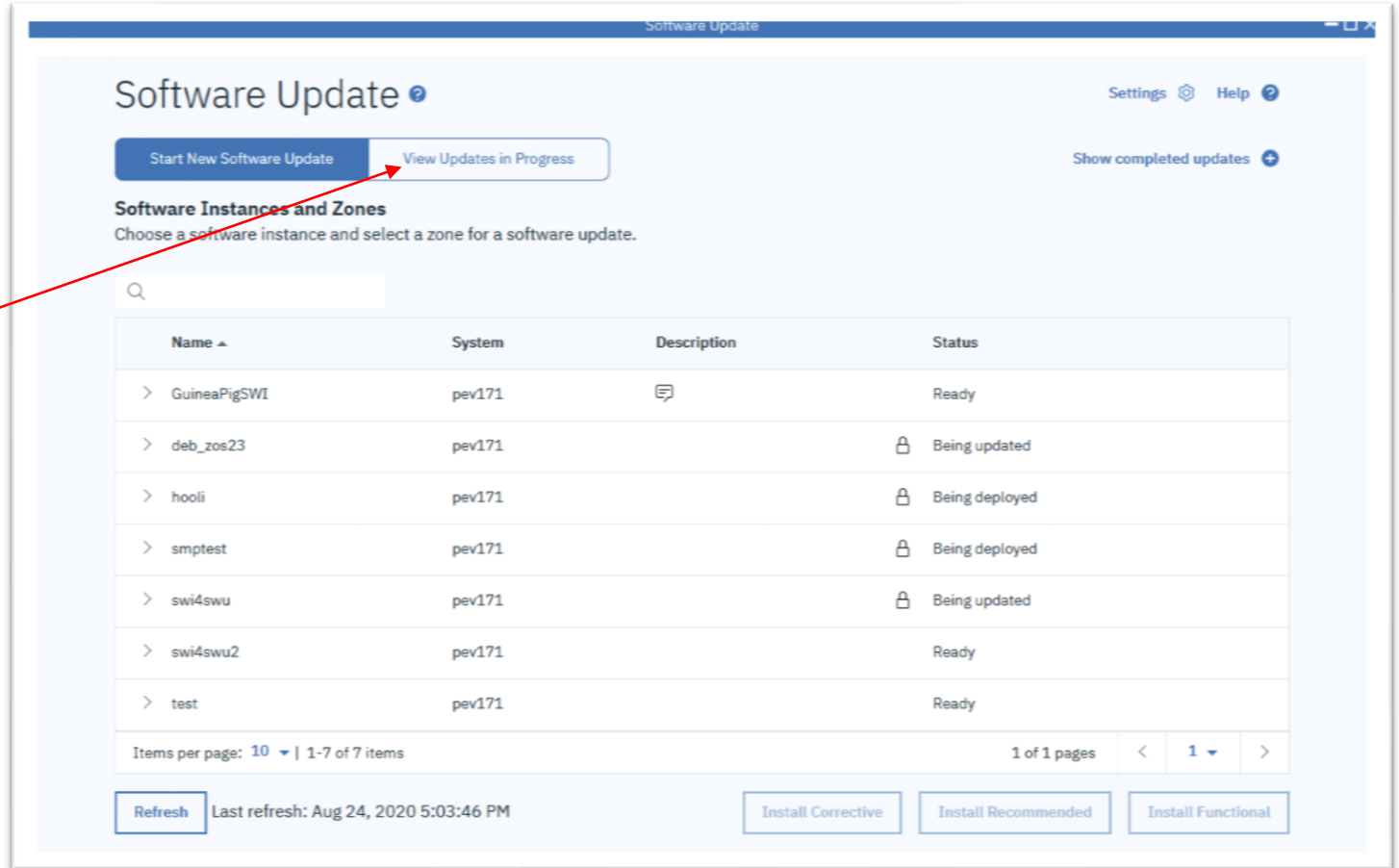
Save and Resume



- Most steps in the process allow you to pause and then resume later.
- Click the **“Save and Exit”** button.

Save and Resume

On the Software Update main page click **“View Updates in Progress”** to see the saved update operations.



The screenshot shows the 'Software Update' page. At the top, there are buttons for 'Start New Software Update' and 'View Updates in Progress'. A red arrow points from the text on the left to the 'View Updates in Progress' button. Below the buttons, there is a section titled 'Software Instances and Zones' with a search bar and a table of instances. The table has columns for Name, System, Description, and Status. At the bottom, there are buttons for 'Refresh', 'Install Corrective', 'Install Recommended', and 'Install Functional'.

Software Update

Settings Help

Start New Software Update View Updates in Progress

Show completed updates

Software Instances and Zones
Choose a software instance and select a zone for a software update.

Q

Name	System	Description	Status
> GuineaPigSWI	pev171		Ready
> deb_zos23	pev171		Being updated
> hooli	pev171		Being deployed
> smptest	pev171		Being deployed
> swi4swu	pev171		Being updated
> swi4swu2	pev171		Ready
> test	pev171		Ready

Items per page: 10 | 1-7 of 7 items

1 of 1 pages

Refresh Last refresh: Aug 24, 2020 5:03:46 PM

Install Corrective Install Recommended Install Functional

Save and Resume

Select the operation you want to resume.

Click “Resume Update” to open and return to the saved step.

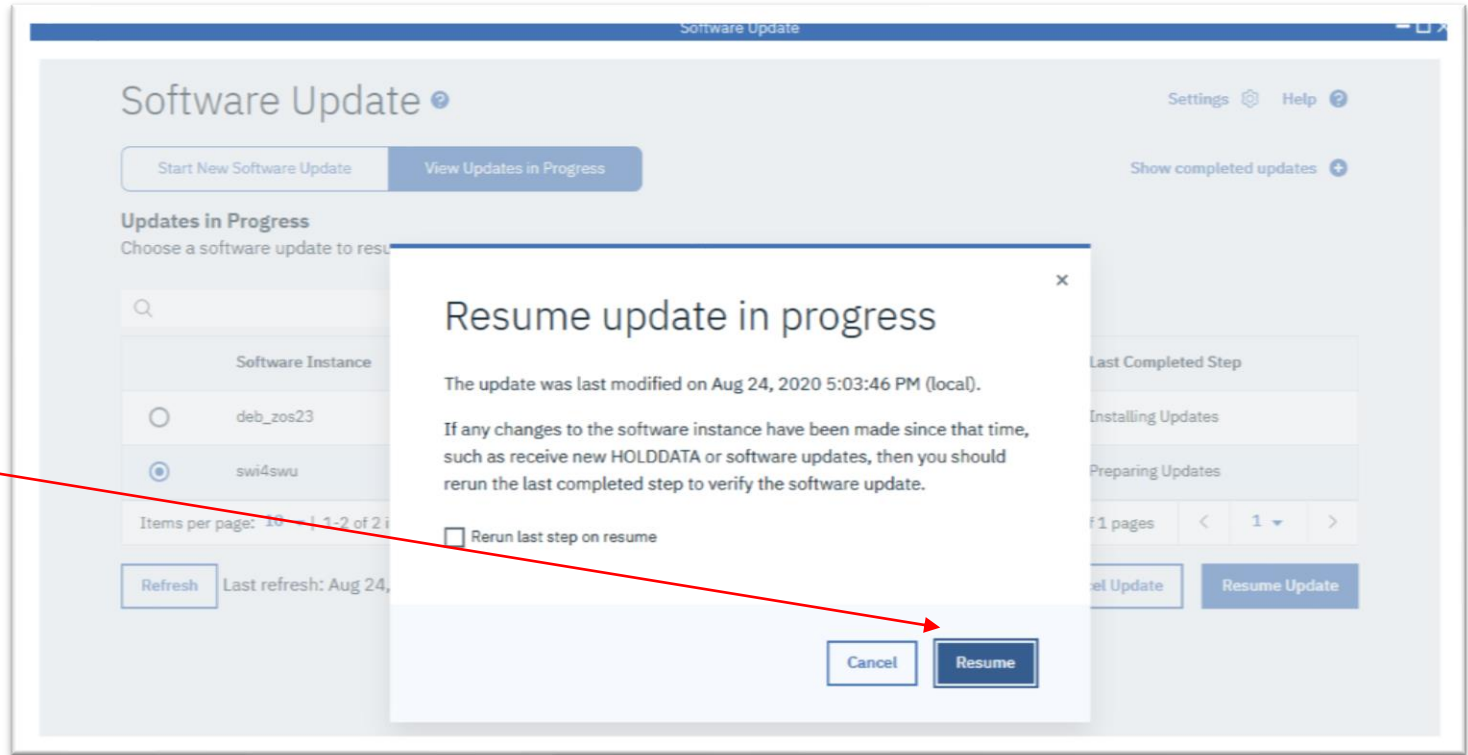
The screenshot shows the 'Software Update' interface. At the top, there are buttons for 'Start New Software Update' and 'View Updates in Progress'. Below this is the 'Updates in Progress' section with a search bar and a table of updates. The table has columns for Software Instance, Zone, System, Type, Notes, Last Modified (local), and Last Completed Step. Two updates are listed: 'deb_zos23' and 'swi4swu'. The 'swi4swu' update is selected, indicated by a blue circle and a blue background. Below the table, there are buttons for 'Refresh', 'Cancel Update', and 'Resume Update'. A red arrow points from the text 'Click “Resume Update” to open and return to the saved step.' to the 'Resume Update' button. Another red arrow points from the text 'Type of update: Functional, Recommended, or Corrective' to the 'F' in the 'Type' column of the 'swi4swu' update row.

	Software Instance	Zone	System	Type	Notes	Last Modified (local)	Last Completed Step
<input type="radio"/>	deb_zos23	TGT23	pev171	F...		Aug 3, 2020 12:14:51 PM	Installing Updates
<input checked="" type="radio"/>	swi4swu	TGT	pev171	F...		Aug 24, 2020 5:03:46 PM	Preparing Updates

Type of update: Functional, Recommended, or Corrective

Save and Resume

Click “Resume”
to open and
return to the
saved step.



...Notice reminder if you wanted to rerun last step, in case you have updated HOLDDATA to consider...

Completed and Cancelled

The screenshot shows the 'Software Update' interface. At the top, there are buttons for 'Start New Software Update' and 'View Updates in Progress'. Below these is the section 'Software Instances and Zones' with a search bar and a table of instances. A red arrow points to the 'Show completed updates' button in the top right corner.

Name	System	Description	Status
> GuineaPigSWI	pev171		Ready
> deb_zos23	pev171		Being updated
> hooli	pev171		Being deployed
> smptest	pev171		Being deployed
> swi4swu	pev171		Being updated
> swi4swu2	pev171		Ready
> test	pev171		Ready

Items per page: 10 | 1-7 of 7 items

1 of 1 pages

Refresh Last refresh: Aug 24, 2020 5:34:17 PM

Install Corrective Install Recommended Install Functional

On the Software Update main page click **“Show completed updates”** to view completed and cancelled update operations.

Completed and Cancelled

Software Update / Completed Updates

Completed Updates

Software Instance Name Search

Software Instance	Zone	System	Type	Notes	Date Completed (local)	Status	
swi4swu	TGT	pev171	F		Aug 24, 2020 4:45:02 PM	Cancelled	↓
swi4swu2	TGT	pev171	R		Aug 24, 2020 4:34:50 PM	Cancelled	↓
swi4swu2	TGT	pev171	C		Aug 24, 2020 3:30:36 PM	Completed	↓
swi4swu2	TGT	pev171	R		Aug 24, 2020 11:30:07 AM	Cancelled with	↓
swi4swu	TGT	pev171	F		Aug 21, 2020 12:28:57 PM	Cancelled	↓
swi4swu2	TGT	pev171	R		Aug 3, 2020 10:42:30 AM	Completed	↓
swi4swu	TGT	pev171	R		Jul 16, 2020 3:40:31 PM	Completed	↓
swi4swu	TGT	pev171	F		Jul 15, 2020 3:51:39 PM	Cancelled	↓
swi4swu	TGT	pev171	C		Jul 9, 2020 11:55:43 AM	Cancelled	↓
swi4swu	TGT	pev171	R		Jul 9, 2020 11:21:15 AM	Cancelled	↓

Items per page: 10 | 1-10 of 12 items

1 of 2 pages < 1 >

All SMP/E Output
All HOLDS
Post-install HOLDS

The list of completed update operations are displayed.

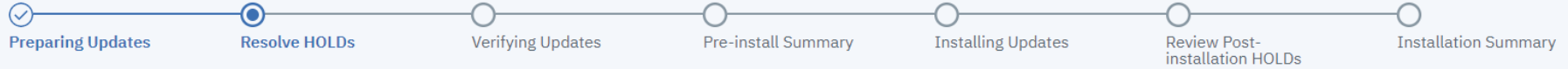
Click to download saved output.

Type of update: Functional, Recommended, or Corrective

Adding a description

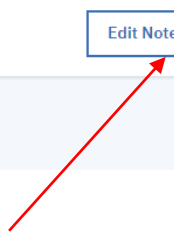
Resolve HOLDS ?

Help ?



Software Instance	Zone	Notes	
Db2_12_PSI_July2020	DB2V12T	Use a maximum of 140 characters per note.	Edit Notes

Unresolved (21) | Resolved (0) | Resolve after Installation (0) | Excluded (0)



Notice **“Edit Notes”** on the Software Instance update. Click on it.

Adding a description

Software Instance	Zone	Notes
Db2_12_PSI_July2020	DB2V12T	Db2 12 Recommended Service install for RSU2009 <input type="button" value="Save"/>

Fill in a good description, and **“SAVE”**.

Updates in Progress
Choose a software update to resume.

	Software Instance	Zone	System	Type	Notes	Last Modified (local)	Last Completed Step
<input type="radio"/>	Db2_12_PSI_July2020	DB2V12T	AQFT	C...		Nov 1, 2020 5:59:45 PM	Preparing Updates
<input type="radio"/>	IMS_PSI_July92020	IMS151T	AQFT		Db2 12 Recommended update for RSU 2009	, 2020 12:42:50 PM	Preparing Updates

Hover over later for a nice description

Settings

The screenshot shows the 'Software Update' window. At the top, there are 'Settings' and 'Help' links. Below them are two buttons: 'Start New Software Update' and 'View Updates in Progress'. A section titled 'Software Instances and Zones' contains a search bar and a table of instances. A red arrow points from the 'Settings' link to the text on the right.

Name ▲	System	Description	Status
> GuineaPigSWI	pev171		Ready
> deb_zos23	pev171		Being updated
> hooli	pev171		Being deployed
> smptest	pev171		Being deployed
> swi4swu	pev171		Being updated
> swi4swu2	pev171		Ready
> test	pev171		Ready

Items per page: 10 ▾ | 1-7 of 7 items

1 of 1 pages < 1 ▾ >

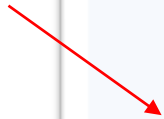
[Refresh](#) Last refresh: Aug 24, 2020 5:34:17 PM

[Install Corrective](#) [Install Recommended](#) [Install Functional](#)

On the
Software
Update
main page
click
“Settings”

Settings

Select a z/OSMF host system from the dropdown



Specify allocation parameters for the temporary SMP/E output data sets on the selected system: SMPOUT, SMPRPT, SMPHRPT, SMPLIST, SYSPRINT.

Software Update / Settings

Settings ?

Select a System

pev171

Temporary Data Set Allocation Parameters ⓘ

Storage Class ⓘ

Data Set Name Prefix ⓘ

ZOSMFT6

Data Class ⓘ

Unit ⓘ

SYSALLDA

Management Class ⓘ

Volume Serial ⓘ

Reset all parameters

Close Save

Acquisition of Updates

(RECEIVE into global zone)

- Software Update does **not** acquire software updates nor HOLDDATA.
- Updates must already be received into the global zone and SMPPTS.
- The **BEST PRACTICE** is to use **SMP/E RECEIVE ORDER**
 - Use a job scheduler to automate acquisition on a regular cadence
- The SMP/E RECEIVE ORDER command works with a server to
 - Build custom packages of PTFs
 - Download PTFs to your z/OS
 - Receive PTFs into the global zone and SMPPTS
- IBM and several leading z/OS software providers support SMP/E RECEIVE ORDER to acquire PTFs and HOLDDATA for their software products.



In Summary



**Software
Update**

- z/OSMF Software Update simplifies installing SMP/E managed software updates (PTFs).
- Target users are less experienced z/OS installers
 - Early tenure z/OS system administrators and system programmers.
- New function for z/OS **V2.4** and **V2.3** with PTFs for APAR PH28412.
- For more information:
<https://www.ibm.com/support/z-content-solutions/software-update-zosmf/>

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**NHS CHARITIES
TOGETHER**

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