



CA Database Management for Db2 for z/OS 20.0 (Db2 Tools) Customer Community Update

Team Product Owners

March 8th, 2021

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Agenda

CA Db2 Tools

- Providing flexibility in how maintenance is rolled out across your environments
- New Xmanager Configuration requirements
- Introduction to Xmanager Groups

Please Provide Feedback...





Flexibility in how maintenance is rolled out across your environments

Andrew Badgley

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Why make a change at all???

Currently maintenance rollout for CA Db2 Tools requires that maintenance be rolled out across all of your Xmanagers within an Xmanager Group at the same time.

Customers have requested that we provide more flexibility to this process.

The Challenge... Incompatible Changes

Products that send message traffic across subsystems, such as Detector, Subsystem Analyzer, Xmanager, etc., may introduce incompatibilities in their shared communications when running at different levels of maintenance.

Products running at different levels of maintenance but accessing the same Db2 Catalog may introduce incompatibilities in their product tables.

Products running at different levels of maintenance but accessing the same product dataset may introduce incompatibilities into the dataset.

The Solution... Associate Feature Activation with the Maintenance Level

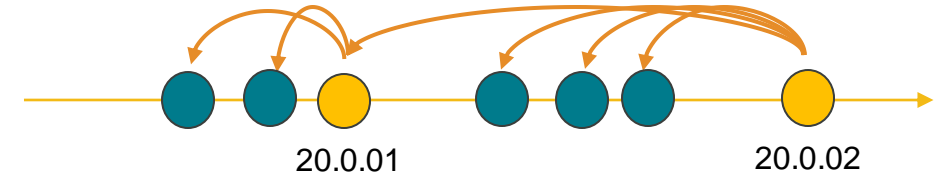
Much like Db2 Function Levels associate new Db2 Features with a required level of maintenance and activation, we will be associating features that introduce incompatible changes to a specific maintenance level and require activation.

Activation of these features will require that all members of an Xman group be at the same or higher maintenance level. Until activation occurs the new features will be disabled.

How Does Activation work?

Level Set PTF ●

- Introduced as part of Continuous Delivery
- Prereqs all PTFs ● since previous Level Set PTF
- Applying this PTF ensures that all maintenance is current to that point
- Product version string expanded – 20.0.*mm*



Post-Install Compare job execution

- Makes sure that product Db2 objects are ready for new functionality

Activate the new features

- The maintenance Level Set of all Xmans in an Xman Group => *mm* in order to activate *mm*
- Product features associated to Level Set *mm* require activation of Level Set *mm*

New Xmanager Operator Commands

F <ptxman>,SHOW LEVELSET

- Level Set status will be written in the Xmanager Job Log
- If the Xmanager was started with XSYS=Y, then all Xmanagers participating in the group are included

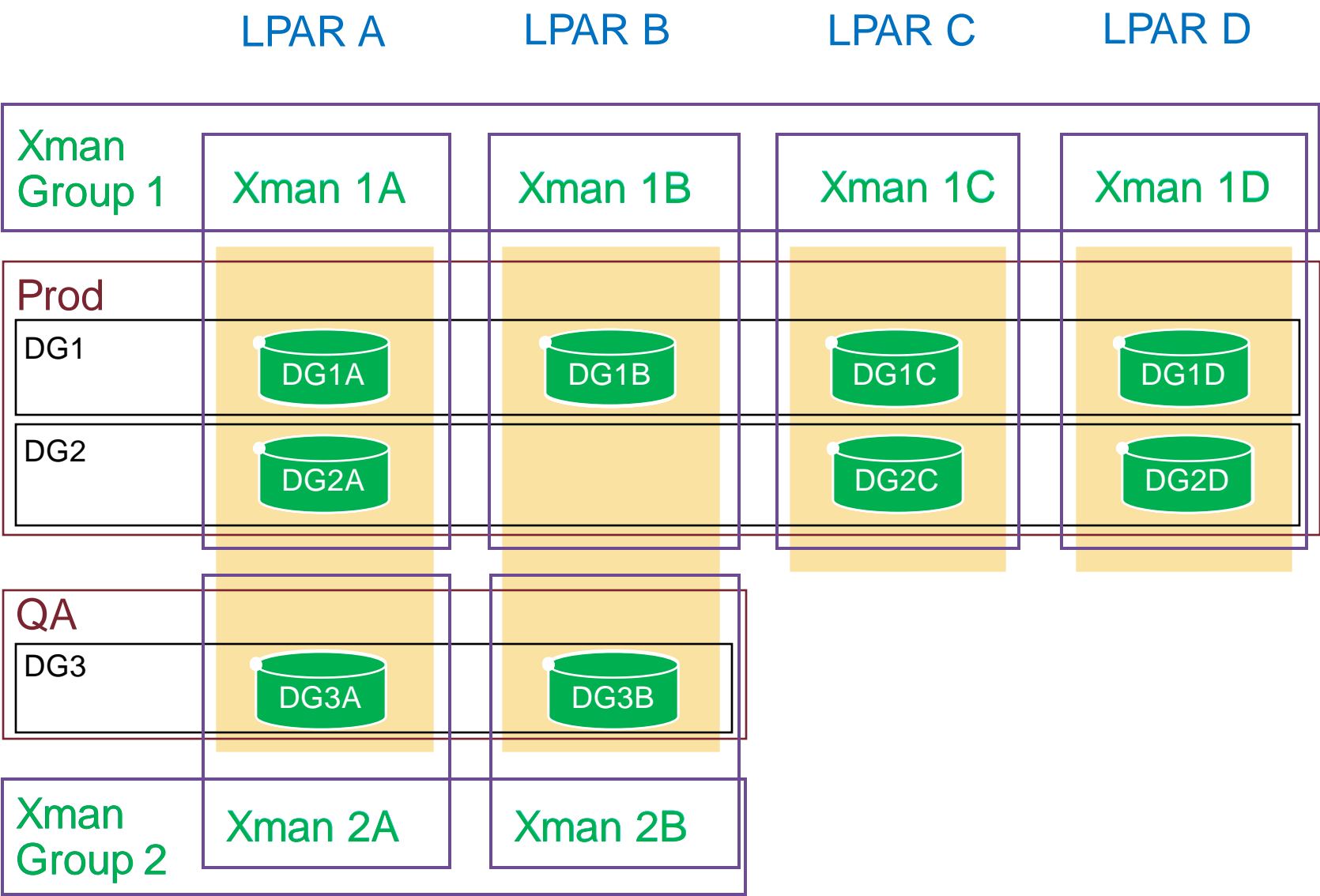
F <ptxman>,TEST LEVELSET(vv.r.mm)

- Check that all Xmanagers are at the needed Level Set or higher

F <ptxman>. ACTIVATE LEVELSET(vv.r.mm)

- Activate a new Level Set
- A new Security Resource needs to be defined to perform the activation
Resource class: CADB2
Service: COMMAND
Function: LEVELSET.ACTIVATE.group.lpar.xmid
- Activation of a Level Set requires all Xmanagers in the XMAN Group to be at the specified Level Set or higher
- Activation to a lower Level Set is possible if an undesirable behavior is identified
- After Activation of a Level Set an SMP/E Restore to remove the Level Set PTF is not supported

Rollout of CA Db2 Tools Maintenance w/ Level Set Activation



- Current Active Level Set
- New maintenance applied
- Compare/Binds complete
- New Active Level Set

Xman Group 1 – New Functionality

Xman Group 2 – New Functionality



New Xmanager Requirements

New Xmanager Installation Requirements

Each Xmanager will require a **VSAM configuration dataset** to be defined

- Any Xmanager missing this dataset will have a status of Incomplete in the SHOW LEVELSET report

Xmanagers with XSYS=Y will store configuration information in a **new CF structure**

- All Xmanagers in the group will have a status of Incomplete in the SHOW LEVELSET report if the CF structure is not defined and allocated

Xmanager Customization steps have been added to Post Install

All Products require Xmanager*

All CA Db2 Tools products will be required to connect to an Xmanager*

- No longer optional for CA SYSVIEW Performance Management Option for Db2
- All other products* already have this requirement

The Xmanager will identify to the product what Features have been activated based on the Activated Level Set

The Xmanager will validate the runtime libraries being used by the product to make sure there is support for the activated Features

*CA Report Facility does not and will not require a connection to Xmanager. Future enhancements to CA Report Facility are not expected to introduce Incompatible Changes and so no connection to Xmanager is required.



Introduction to Xmanager Groups

What is an Xmanager Group

XSYS(Y) enables the Cross System Communication support. This allows Xmanagers to communicate with each other even if they are on different LPARs.

Cross System Communication is limited to within a SYSPLEX so an Xmanager will not be able to communicate with Xmanagers in a different SYSPLEX

Xmanager communication is further limited to Xmanagers within the same group

By default all Xmanagers, with XSYS(Y), on the same CA Db2 Tools version are in the same group. i.e. 19.0 vs 20.0.

The **GROUP()** parameter can be used to control which Xmanagers communicate with each other

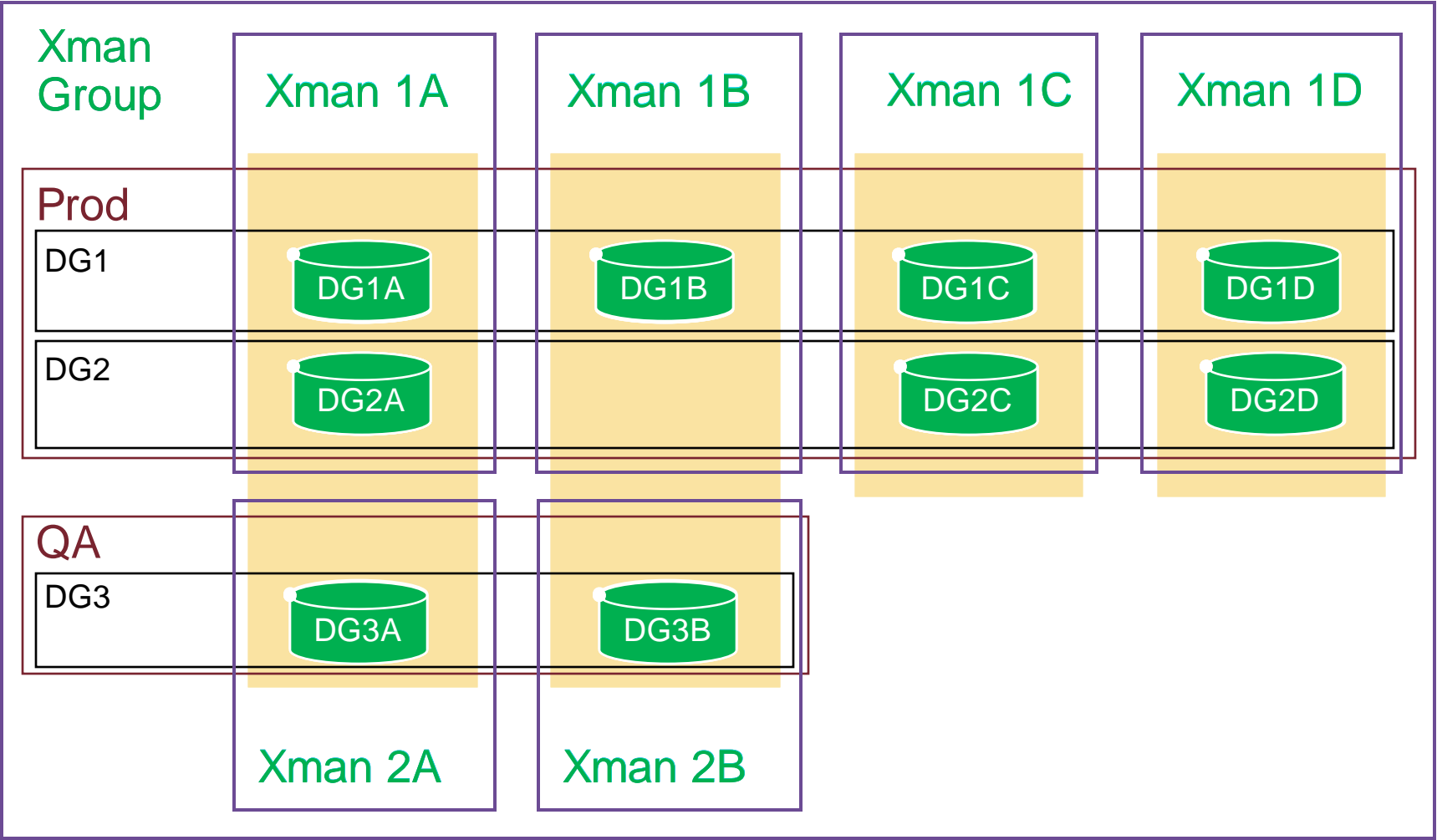
Default Xman Group

LPAR A

LPAR B

LPAR C

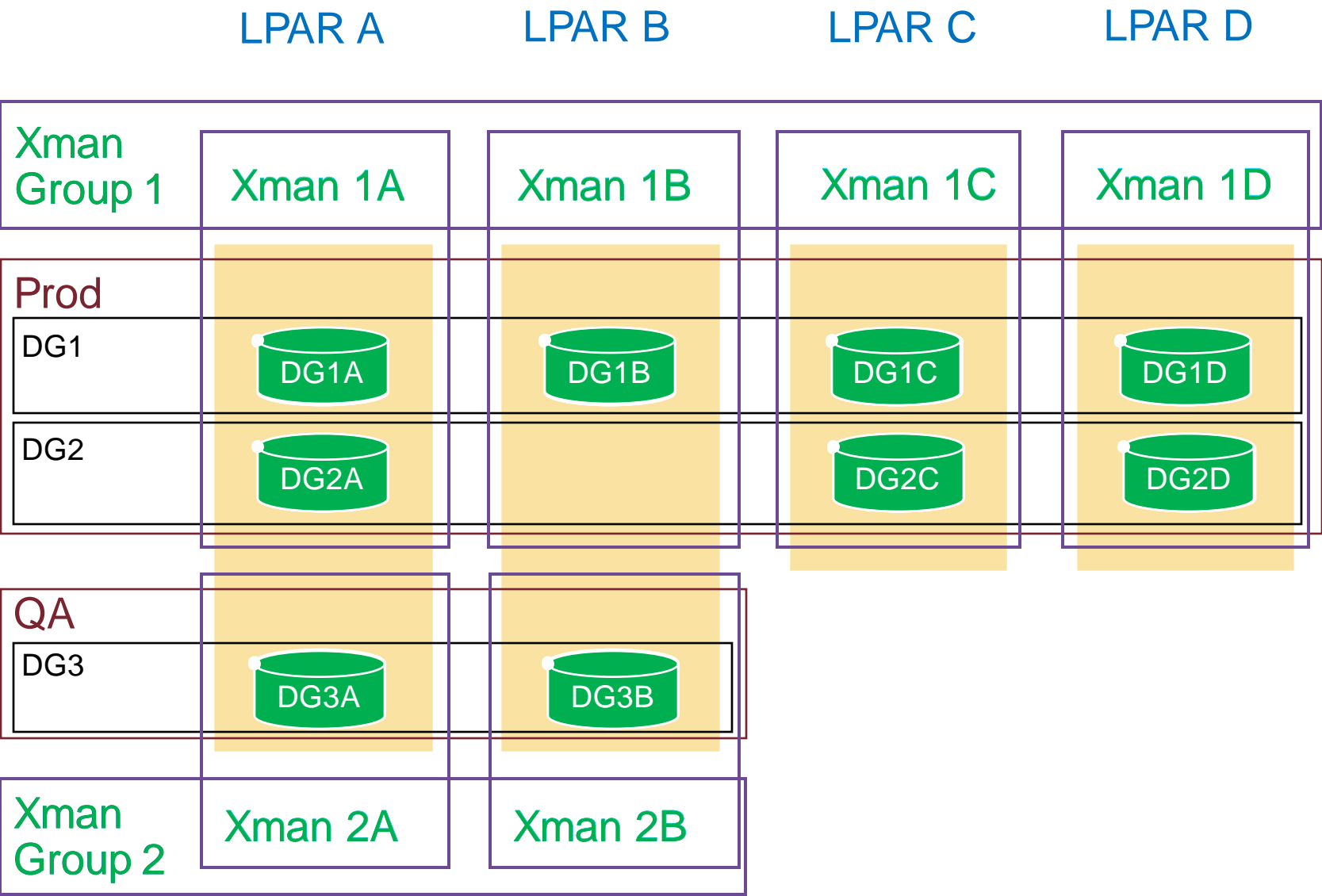
LPAR D



- Current Active Level Set
- New maintenance applied
- Compare/Binds complete
- New Active Level Set

Xman Group – New Functionality

2 Xmanager Groups



- Current Active Level Set
- New maintenance applied
- Compare/Binds complete
- New Active Level Set

Xman Group 1 – New Functionality

Xman Group 2 – New Functionality



In Summary



To-Dos before activating a new Level Set

Generate the TEST LEVELSET report and address any concerns

- Make sure that no Xmanagers have a Status of Incomplete
- Make sure that all Active Xmanagers have a Maintenance Level Set value equal to or higher than the Level Set you wish to activate

Run Post-Install Compare and Bind steps as always on all Db2 subsystems in the SETUPxx parmlib member used by the Xmanager(s)

The Cliffsnotes...

CA Db2 Tools maintenance rollout currently requires all Xmanagers that communicate with each other to be upgraded at the same time

CA Db2 Tools maintenance rollout is being enhanced to allow each Xmanager to be upgraded independently

Activation of a new Level Set requires all Xmanagers to be at a supporting maintenance level

New Product functionality becomes available by activating the associated Level Set

You activate a lower Level Set if unwanted behavior was introduced

Each Xmanager will require a new VSAM dataset

A new CF structure will be required for each SYSPLEX when XSYS=Y is specified

CA SYSVIEW Performance Management Option for Db2 requires Xmanager

Xmanager Groups may impact how you activate new CA Db2 Tools functionality across your environment

Please Provide Feedback...



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In Closing...

When is the next Community Update call?

The 2nd Monday of each month

Our next call will be Monday April 12th, 2021

When is the next Db2 Tools Suite Product Roadmap Webcast?

Wednesday March 24th, 2021

CA Db2 Tools 20.0 Validation Project

<https://validate.broadcom.com/key/DB2Tools200>



Thank You