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2021 NA Db2 Tech Conference
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Jim Pickel, IBM

New Announcement Db2 AI for z/OS – Distributed Connection Control

Session #6322
z/OS

4/7/21

Agenda

- Db2zAI "Distributed Connection Control" introductio
- Db2z connection and thread pooling strategy
- Db2z monitoring of connections and threads
- Db2zAI learning about distributed workloads
- Db2zAI generating profiles to protect your system
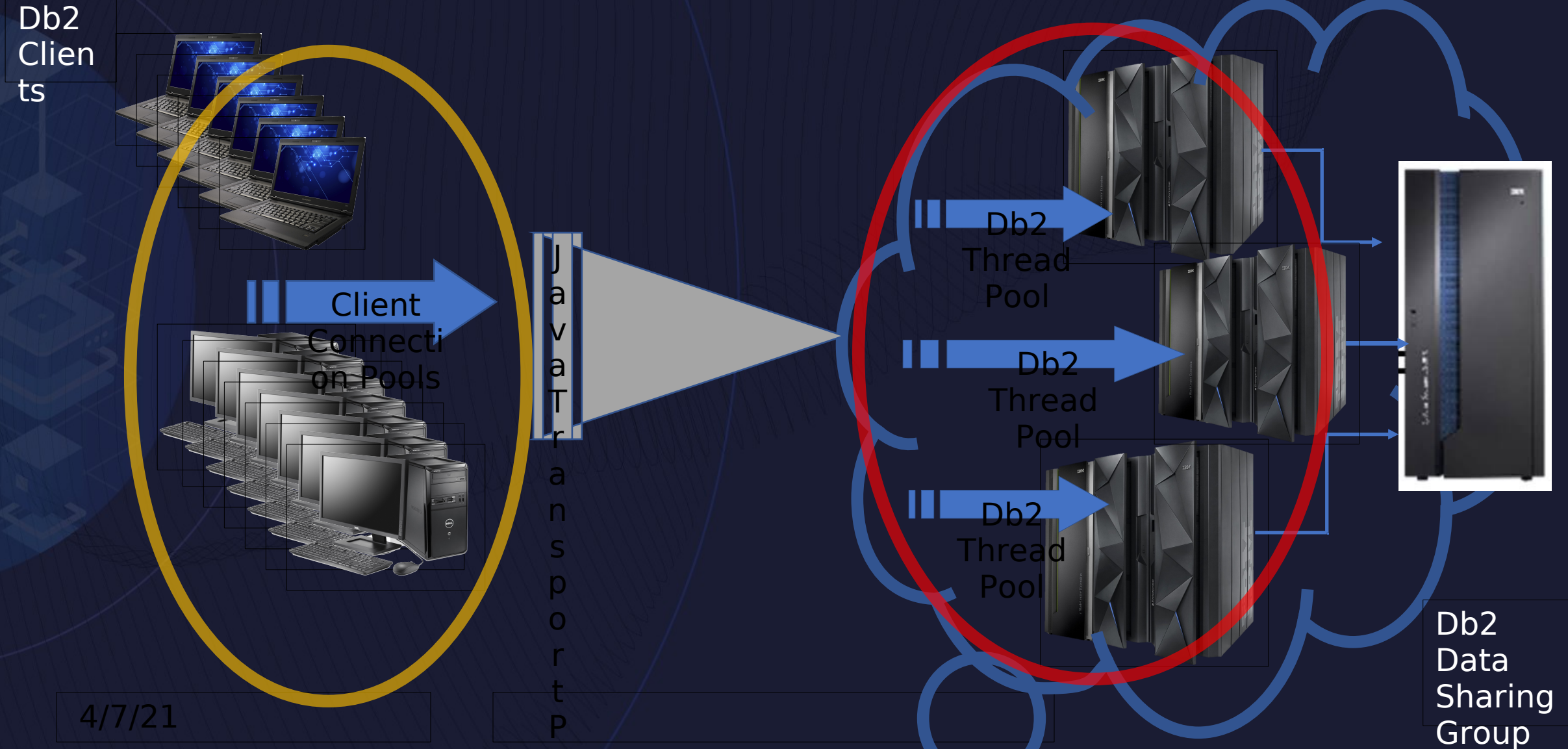- Db2zAI "Distributed Connection Control" demo

Db2zAI "Distributed Connection Control" introduction

Help you allocate, monitor, and adjust connections and threads for inbound distributed connections across your Db2 groups and subsystems

- When connection or thread usage exceeds a defined threshold, Db2ZAI issues an alert and provides historical statistical data that helps you determine the correct course of action

- Db2ZAI regulates connection and thread requests when available resources are approaching maximum capacity

- Capabilities drastically reduce the chance that a single application that doesn't manage connections efficiently or

Db2z connection and thread pooling strategy

Db2 Clients

Client Connection Pools

JavaTransportP...

Db2 Thread Pool

Db2 Thread Pool

Db2 Thread Pool

Db2 Data Sharing Group

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Db2z monitoring of connection and thread using profiles

The role of profiles

· Profiles enable you to monitor and control various aspects of your Db2 subsystems

· Each set of profiles contain the criteria and thresholds that are used to monitor and control connection and thread usage per member:

MONITOR CONNECTIONS WARNING|EXCEPTION

Db2zAI learning about your distributed workloads

- Db2 distributed location statistics are automatically collected when Db2ZAI is started.

- CONDBAT and MAXDBAT subsystem parameters are the input to the training process

  - During the training process, Db2ZAI analyzes this information and creates recommended profiles based on its workload analysis

  - To ensure that Db2ZAI can create the most accurate profiles possible, conduct training on all available statistics including your peak work times

- At the conclusion of the training process, Db2ZAI creates the following information for each IP address that it analyzes

Db2zAI learning about your distributed workloads

- For each static IP address, a set of profiles are generated

  - Warning profile for connections and for threads which alerts you when an IP address consumes more connections than it did during the training period

  - Exception profile for connections and for threads that regulate the assignment of new connections and threads when other applications could be impacted due to the current MAXDBAT and CONDBAT limits

- For dynamic IP addresses, a set of profiles are generated

  - Warning profile for all connections and for all

Db2zAI Distributed Connection Control Alerts

- When a connection exceeds its warning threshold, an informational alert is generated.

    - This alert does not affect incoming work. When a connection exceeds its exception threshold, an alert is generated, and connections are rejected until connections fall below the threshold

- When a connection requests a thread to execute SQL that exceeds its warning threshold, an informational alert is generated.

    - This alert does not affect incoming work.

- When a request on a connection for a thread is received that exceeds its exception threshold, an alert is generated, the thread

Db2zAI "Distributed Connection Control" demo

Demo

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