Data Events for z/TPF Files

Unlocking your z/TPF data

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z/TPF and z/TPFDF Architecture & Development

IBM **z/TPF**

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Solving Problems with z/TPF Data
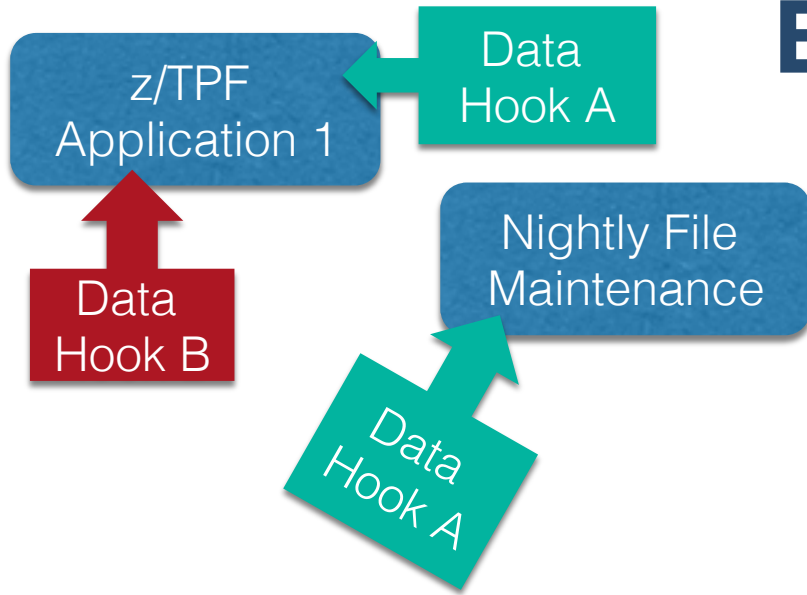
- z/TPF data is needed on remote systems to solve business problems...
  - Analytics for business insights
  - Data caching to service read-only queries and reduce load on z/TPF systems
  - Data warehouse to store expired database entries
  - Pub/Sub servers to store updates and propagate to other systems

Unlocking z/TPF Data before Data Events

z/TPF Application 1

Data Hook A

Data Hook B

Nightly File Maintenance

Data Hook A

- Applications updated to call hooks for every update

- Unique hooks to capture updates for each database

- May not invest in capturing updates for all paths

- Ongoing maintenance costs to maintain changes

Data events for z/TPF Files

A business analyst can do analytics and queries (SQL or other) against a near real-time copy of the z/TPF File data without any z/TPF application changes required.

Unlocking z/TPF Data with Data Events

z/TPF Application 1

Nightly File Maintenance

Event specs & Dispatch Adapters
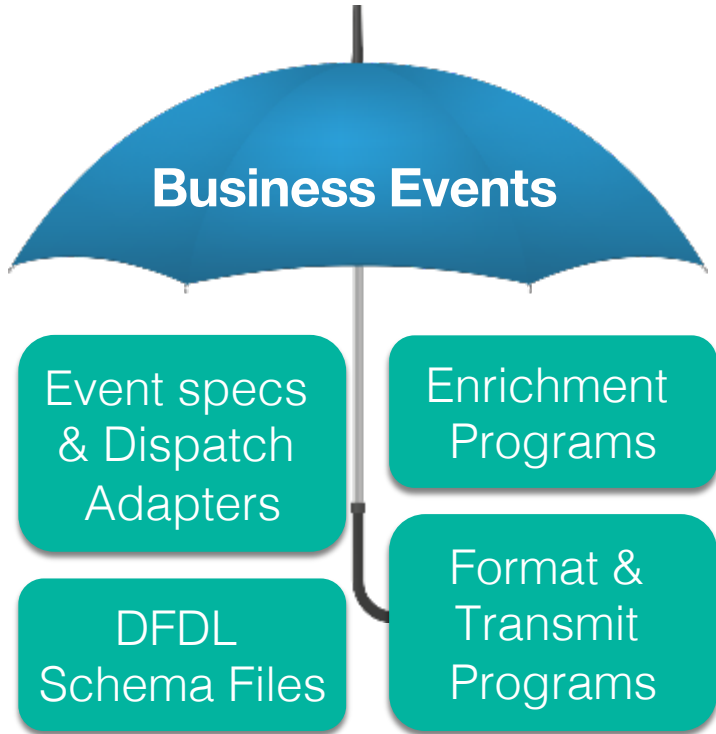
Enrichment Programs

DFDL Schema Files

Format & Transmit Programs

- Create event specifications and dispatch adapters
- Create DFDL schema files to map data
- Write enrichment and custom format/transmit programs
- Enable data events to automatically capture updates

No application changes required!

Data events for z/TPFDF & z/TPF Files!

Business Events

- Event specs & Dispatch Adapters
- Enrichment Programs
- DFDL Schema Files
- Format & Transmit Programs

- Defined and enabled through business events

  - Business event specifications, dispatch adapters, and DFDL schemas

- Business event infrastructure processes the data events

  - Enrichment: Application and dispatch enrichment

  - Format: Common Base Event (CBE), binary, and custom formats

  - Transmit: Websphere MQ and custom transmit

Defining Data Events for ...

z/TPFDF Files

- Update DBDEF macro

  - Describes a z/TPFDF file, which are record chains with the same record ID

  - Defines event name for this file and file ID

- Create business event specification

  - Specifies LREC ID's to collect for this file ID

z/TPF Files

- Create z/TPF file collection descriptor

  - Describes a z/TPF file, which are record chains with the same record ID

  - Defines event name for this file and record ID

- Create business event specification

  - Specifies record types to collect for this record ID: Fixed Records, Long Term Pools, and Short Term Pools

Generating Data Events for z/TPF Files

z/TPF Application	z/TPF System	Business Events
• File Record X	• File Record X • If record ID enabled for eventing, send Record X to Business Event Processing	• Create Event Message Data Event • Format Event • Transmit Event

Event Message Format

Business events with both data and context

Event Message Format

Event Header
- Event name, timestamp, intercept name, etc.
- Initialized and managed by z/TPF system

Event ECB Context
- Optional user area shared across events for an ECB

Event User Context
- Optional user area unique to an event

Event Data
- Signal Event: Data from tpf_bev_signal()
- Data Event: Database context and changed data

Event Data for a z/TPF File

z/TPF File Event Data

- Data event header
  - Data event type
  - Change Type
- z/TPF file context
  - z/TPF record ID and collection name
  - File address
  - Timestamp
- Data
  - Data event record header
  - Record (Small, Large, 4K) as seen by application
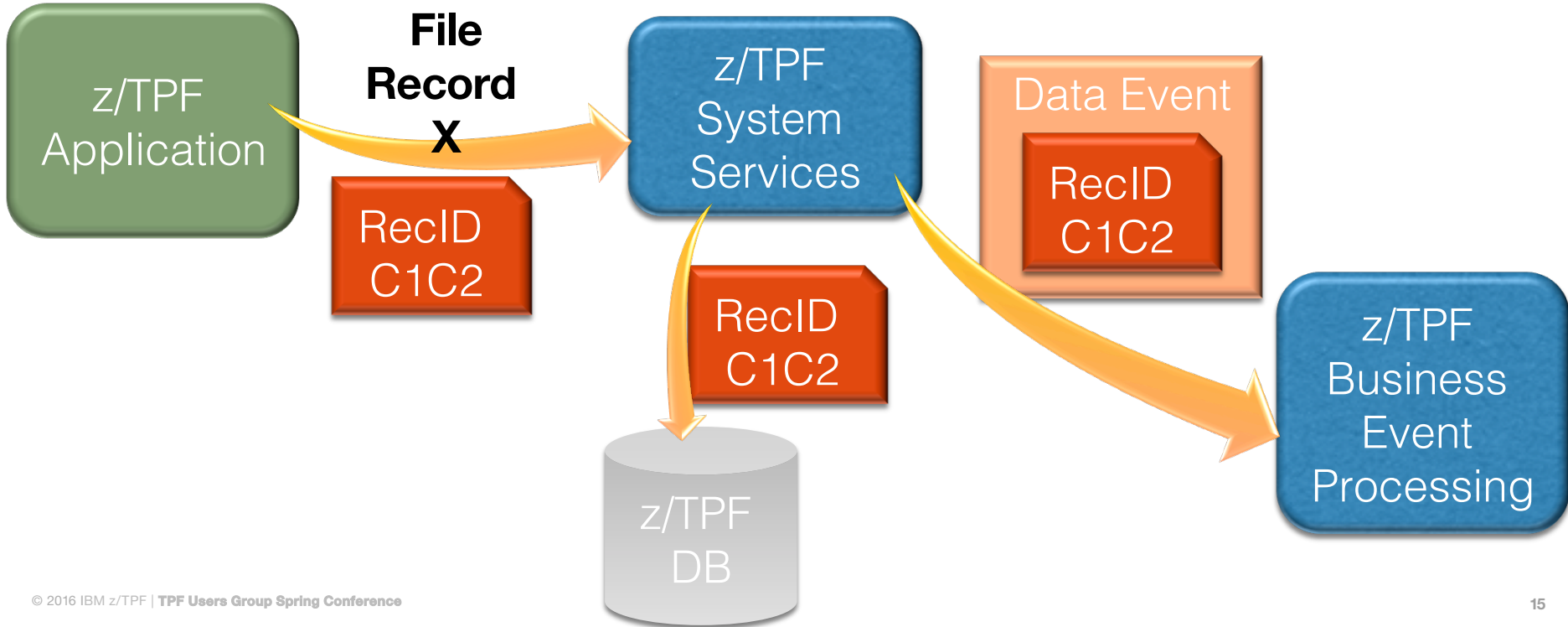
Data Events for z/TPF Files

- Automatically create data events with no application changes
- Format and transmit data events to one or more remote systems
  - Analytics
  - Data cache
  - Data warehouse
  - Pub/Sub servers
- PJ43301 on PUT 13

Thank you!
Questions or comments?

Data Event Flow

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