

XML Without Xanax

How to Handle XML in SQL Server
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About Me

- ▶ 10+ years of experience in IT
- ▶ Developer, Accidental DBA, & Consultant
- ▶ Focus on MS SQL development & performance tuning
- ▶ Chapter Leader for the Ohio North SQL Server User Group
- ▶ MCSA/MCSE 2012 & MCTS/MCITP DBA 2005 & 2008
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XML Fears

- ▶ I don't understand it
- ▶ I don't know how to generate it
- ▶ I don't know what to do with it/how to use it
- ▶ It doesn't perform well
- ▶ (Dammit Jim!) I'm a DBA, not a Developer!



XML Use Cases?

- ▶ xEvents (SQL Trace was deprecated with the release of SQL 2012)
- ▶ Sparse/unstructured data
- ▶ Data from 3rd parties and applications (webservices & APIs like Google or Bing maps, etc.)
- ▶ Service Broker

XML Isn't Perfect

- ▶ Stored as a LOB (this should make you sad again)
- ▶ Requires a different set of query syntax than relational data (xQuery)
- ▶ Can be difficult to parse (slow queries, high CPU)
- ▶ Difficult to aggregate XML values between multiple rows/columns (not good for reporting)

Understanding XML

- ▶ Document
- ▶ Element
- ▶ Node
- ▶ Attribute
- ▶ Schema (xsd)
- ▶ Style Sheet (xsl)

```
<?xml version="1.0" encoding="utf-8"?>
<Invoices>
  <Invoice id="123">
    <LineItem id="WIDG">Widget</LineItem>
    <LineItem id="COG">Cog</LineItem>
  </Invoice>
  <Invoice id="456">
    <LineItem id="SPKT">Sprocket</LineItem>
    <LineItem id="GEAR">Gear</LineItem>
  </Invoice>
</Invoices>
```

XML In SQL Server

► For XML

► Database Objects

- ▶ XML Variables (XSD-bound or unbound)
- ▶ XML Columns (XSD-bound or unbound)
- ▶ XML Indexes (primary & secondary)
- ▶ XML Schema Collections (XSD)

► xQuery

- ▶ Exist(<path>)
- ▶ Value(<path>, type)
- ▶ Node(<root path>)
- ▶ Query(<root path>)
- ▶ Modify(<path & change to make>)

► OpenXML

Summary

► Database Objects

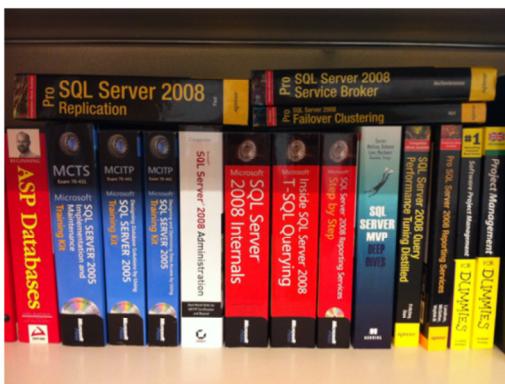
- ▶ XML Variables
- ▶ XML Columns
(typed & un-typed)
- ▶ XML Indexes
(primary & secondary)
- ▶ XML Schema Collections
(XSD)

► Expressions

- ▶ For XML
- ▶ xQuery
- ▶ Exist()
- ▶ Value()
- ▶ Node()
- ▶ Query()
- ▶ Modify()

▶ **OpenXML**

Resources



www.SQLDiablo.com/go/XML

Questions?



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