eServices Administrator's Guide

General Remarks on Partitioning

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A partition is a division of a logical database or its constituent elements into independent parts. Database partitioning may be done for reasons of performance, manageability, or availability. This section concentrates on partitioning to improve performance.

By splitting a large table into several smaller tables, queries that need to access only a fraction of the data can run faster because there is less data to scan. Maintenance tasks, such as rebuilding indexes or backing up a table, can also run more quickly. Placing logical parts on physically separate hardware provides a major performance boost since all this hardware can perform operations in parallel.

Interaction Server performs large numbers of queries, updates, inserts, and deletes on its database. While it is relatively easy to achieve optimal performance with updates, inserts, and deletes, queries (SELECTs) are different.

The Interaction Server database consists of a single major table that stores all the interaction data. Every interaction in the system is always assigned to some interaction queue, represented by value of the field queue in the Interaction Server table. Business processes may employ dozens or even hundreds of queues.

Queues can vary greatly in the way they are used: some hold many interactions which are rarely processed at all (for example, an archive queue), others hold a small number of interactions with a high processing rate (for example, a queue for interactions that need some preliminary processing).

If these two types of queue are separated into different partitions, then the slower selection rate of the first type will not interfere with the high-speed selections of the second type. So the queue field is a natural choice to partition the data on. The remainder of this section describes partitioning by queue.