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## kdb+ Training Courses

The following selection of three day training courses are available:

#### Introduction to Kdb+

This practical introduction to Kdb+ is for those that have no prior experience and want to become competent at selecting data, writing scripts and creating functions. From the philosophy behind kdb+, through the core building-blocks and up to writing analytics that use parallel processing we will help you master kdb+.

#### Kdb+ Data Manipulation

Learn techniques for creating advanced analytics and producing better code in q. On this course you will go into much greater detail about what happens under the covers, be stepped through setting up your own database and consider common analytics and how best to implement them, including performing linear regression and binomial tree pricing. The course is designed for those familiar with kdb+ who want to write fewer lines of maintainable code to solve problems in the best way possible.

#### Kdb+ Architecture and Administration

Learn industry best practices for architecting and maintaining an enterprise standard kdb+ data solution. You will learn how to implement security, load balance queries across multiple machines, reduce storage costs using compression, recover from system crashes and speed up existing queries. **This course is for DBA's responsible for delivering , administrating, and supporting an effective kdb+ platform.** 

### **Customized Training Courses**

Our instructors can come on site and tailor a course specifically to meet the needs of your team. The module outline diagram shows most of the modules we offer. You can choose a list or if you have something else entirely you want covered we have an extensive range of in-house expertise that covers many areas. Please contact us to arrange details.

All our training courses involve a combination of short lectures interspersed with practical exercises and demonstration of best practice solutions. We have found this the most effective method of teaching practical kdb+ skills. On completion, a comprehensive set of notes, examples, exercises and scripts are provided to take away.

If you would like to request a course or have any questions please contact training@timestored.com

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# Module Outline

All our kdb+ training courses are based on the following learning path:

Core	The Basics   Data Types Lists   Primitive Operations Dictionaries   Enumeration
Foundation	Functions Tables Keyed Tables Importing Files   Simple Advanced Execution Control
Intermediate	IPC Adverbs Attributes q-sql multithreading   binary   z Event Handlers Web Interface Joins Functional Queries Disk Storage   ODBC Foreign Lj /ij/ uj/ pj aj   Gateways mserve segments
Advanced	Importing Libraries Advanced Analytics Link Columns Disk Slaves -s .Q Shortcuts Logging / Checkpointing   C/Java Interfaces Bucketing Compression Memory Management

**Introduction to kdb+:** Covers all core modules, all foundation modules and a as many Intermediate modules including qSQL, Joins etc. as time allows.

**Kdb+ Data Manipulation** and **Kdb+ Architecture and Administration**: Cover most intermediate topics and selected advanced topics that are focused on the particular goals for that course.

(\*Note a few custom modules are not listed, e.g. kdb+tick . We are always happy to add modules as requested.)

#### Sample Module Descriptions:

Dictionaries / Lists	Create, Read, Update and Delete from these core data structures.
Primitive Operations	Built-in functions, using these functions on atoms / lists and dictionaries.
Enumeration	Storing character data: strings and symbols, when to use which and why.
Functions	Defining functions, control statements, accessing global variables.
	Protected evaluation and catching exceptions
Tables	Defining, updating, deleting, adding columns, sorting.
IPC	Communication between servers, sending data (a)synchronously, buffering
qSQL	Standard SQL queries: "select col from table where", what's unique to qSQL
Joins	Standard SQL and specialized kdb joins: plus-join, equi-join, asof-join

For full module content and descriptions see our website or email training@timestored.com.