

**Redis for Developers**

**Course Number:** NSQL-104
**Duration:** 2 days

**Overview**

This Redis for Developers training teaches attendees how to build high-performance applications with Redis as the data store. Participants learn how to apply best practices and design patterns in Redis, extend Redis using modules and scripts, and more.

**Prerequisites**

Students must have basic programming knowledge, preferably Python, Java, or Scala, and a basic understanding of Databases.

**Materials**

All Redis training students receive comprehensive courseware.

**Software Needed on Each Student PC**

* Computer with Internet connectivity
* Ability to install software on the computer
* Modern Windows, macOS, or Linux operating system

**Objectives**

* Add, update, and query data in Redis
* Apply best practices and design patterns while using Redis
* Extend Redis by using modules and scripts
* Identify and solve concurrency issues
* Use Redis in streaming applications

**Outline**

* Introduction
	+ SQL vs. NoSQL
	+ Overview of NoSQL databases
	+ Redis overview
	+ Redis use cases
* Installing Redis
	+ Local installation
	+ Using Docker
	+ Redis client setup
* Data Manipulation Commands
	+ Basic commands
	+ Command documentation
	+ Variations of SET
	+ Expiration options
	+ Handling multiple keys
	+ GET and MGET
	+ String ranges
	+ Handling numbers
* Hash Data Structures
	+ Hashes in Redis
	+ Storing and retrieving hashes
	+ Deleting hash data
	+ Numbers in hashes
* Pipelining Commands
	+ Batching commands with pipelines
	+ Executing a pipeline
* Using Sets
	+ Introduction to sets
	+ Enforcing uniqueness using sets
	+ Union, intersection, and difference
	+ Scanning a set
	+ Sorted sets
* Sorting Data
	+ Using SORT command
	+ Joining data with SORT
	+ Parsing sort output
* Lists
	+ Collections using lists
	+ List manipulation
	+ Ranges and searches
	+ Trimming lists
	+ Removing elements
* Concurrency in Redis
	+ Overview of a Lock
	+ Using WithLock
	+ Lock expiration
* Querying Data (RediSearch)
	+ Redis modules
	+ Creating and using an index
	+ Index field types
	+ Numeric, tag, and text queries
* Streams
	+ Communication with streams
	+ Adding messages
	+ Consuming streams
	+ Using XRANGE
	+ Consumer groups
* Conclusion