

# Sela.



DNParallel

## Parallel Programming and TPL Dataflow



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# Parallel Programming and TPL Dataflow

DNParallel - Version: 3

## 4 days course

### Description:

In this course, you will learn how to use the new .NET 4+ features to parallelize existing code, to utilize data parallelism, to create and manage tasks, and to synchronize access to data using concurrent collections.

You will gain deeper understanding on Task, Async/Await, TPL Dataflow.

The course will discuss best practice, api design and guidelines.

### Intended Audience:

.NET developers with at least 1 year of C# programming experience. cursory familiarity with operating system concepts such as multithreading and synchronization is recommended.

### Objectives:

- You will gain deeper understanding on Task, Async/Await, Tpl Dataflow.
- The course will discuss best practice, api design and guidelines
- Understand TPL Dataflow blocks and performance tuning

### Topics:

- **Parallel from start**
  - Intoduction
  - Sync



- Collections
- Task
- Continuation
- Async
- Loops
- IOCP
- Diagnostic
- Exceptions
- Cancellation
- Summary

#### • **TPL Dataflow**

- What is TPL Dataflow?
- Getting started
- Contract
- Blocks
- Action block
- Buffer Block
- Broadcast Block
- Transform Block
- Transform Many Block
- TPL Dataflow and Async
- Performance tuning
- Case Study: Web Crawler
- Appendixs:
- Summary