

Training Course: Fusion Server Foundations 4.1

Duration: 8 hours

Target Persona(s)

DevOps / Search App System Administrator
Search Project Manager
Data Scientist
Data Architect
Search Developer
Front-End Developer
Marketing/Merchandiser

Recommended Audience

This course is the starting point for everyone looking to learn anything about Fusion. Anyone working with a Search platform or business users who are working on or considering a Fusion-based solution implementation will benefit from this course.

Course Summary

Fusion Server Foundations is an introductory course to the Lucidworks' Fusion search platform. It begins by outlining the basic principles of Search, it then examines how those principles operate in Fusion. Topics include ingestion, indexing, querying, and all of the above in the context of multi-node topologies. By understanding the full extent of the platform's distributed capabilities, you will be able to construct and optimize sophisticated search and data-driven applications. This course also provides comprehensive hands-on lab exercises to help solidify the learning objectives.

Pre-Requisites

There are no pre-requisites for this course, however, basic experience with Linux OS and command-line tools is helpful.

Training Course: Fusion Server Foundations 4.1

Duration: 8 hours

Skills and Concepts That You Will Learn

- Understand how Search Applications Work
- Survey the Features of a Search Application
- Understand Fusion's Role in Your Data Ecosystem
- Understand Fusion Architecture and Services
- Hands-On Review of the Fusion Platform
- Learn How to Build a Basic Search Application in Fusion
- Understand the Document Ingest and Indexing Process
- Learn How to Transform Documents for Best Index Performance
- Understand How Fusion Performs Queries
- Understand the Relevance and Scoring of Document Results
- Learn Advanced Query Syntax to Optimize Search Results
- Understand the Components and Services of the Multi-Node Fusion Topology
- Build a Multi-Node Fusion Topology for Distributed Processing

Course Outline

1. What is Search?
2. Introduction to the Fusion Ecosystem
3. Review of the Fusion Architecture and Services
4. Indexing Concepts
5. Ingestion Basics
6. Query Concepts
7. Review of the Fusion Query Language
8. Deploying a Multi-Node Fusion Environment

About Lucidworks Training

There is no better way to learn how to build and manage Search Application in Lucidworks Fusion than from the experts who work on the platforms every day. Our workshop-style courses will provide attendees with the know-how to spin up and optimize sophisticated search applications. All courses are taught in a hands-on lab-based format using updated versions of Lucidworks Fusion. If you want to learn more about other Training courses and modalities, please send an email to: training@lucidworks.com

Training Course: Fusion AI 4.1

Duration: 8 hours

Target Persona(s)

Data Architect
Data Scientist
Search Developer
Search Project Manager

Recommended Audience

Search Project Managers, Data Architects, Developers and Data-Scientists who are working on or considering a Fusion-based solution and are planning to implement Fusion's machine learning capabilities will benefit from this course.

Course Summary

Lucidworks' Fusion AI training is the right choice for those interested in taking Fusion applications to the next level by leveraging Machine Learning techniques to improve Relevance and implement automatic Recommendations and Query Intent capabilities in Fusion. This course explores how you can enrich your data through techniques such as Automatic Classification, Document Clustering, Anomaly Detection, and Natural Language Processing, and make it available to your applications. You will also learn how to implement and use techniques such as Query Intent Detection, Signals and Recommendations, Automatic Synonym Generation, and Automatic Mis-spelling Corrections in order to deliver the most personalized, contextual information and insights using the enriched data. This course also provides comprehensive hands-on lab exercises to help solidify the learning objectives.

Pre-Requisites

This training will introduce advanced Fusion Machine-Learning and AI topics and requires attendees to first take the Fusion Server Foundations 4.1 course. Basic experience with Linux OS and command-line tools is helpful but not required.

Training Course: Fusion AI 4.1

Duration: 8 hours

Skills and Concepts That You Will Learn

- Introduction to AI/ML Jobs and the Types of Tasks and Properties Involved in Them
- Understand how AI Jobs are Implemented in Fusion
- Learn what AI Jobs Fusion Implements OOTB and what are Their Use-cases
- Understand ML Grid Parameters and how to Use Them
- Understand Signals and User Telemetry and Leveraging Them to Achieve Personalized Search Results
- Hands-on Review of Signals and Learning their Impact on Relevance and Personalization
- Understand Document Clustering ML Jobs, their Properties and Use-cases
- Hand-on Configuring, Running and Tuning a Clustering Job in Fusion
- Understand Classification ML Jobs, their Properties and Use-cases
- Hand-on Configuring, Training and Running a Query Intent Classifier Job in Fusion
- Review of the Fusion Experiments Framework
- Hands-on Implementing an Experiments Job in Fusion
- Understand Query Analytics and NLP in Fusion
- Understand how to Implement Personalized Recommendations in Fusion
- Hands-on Configuring and Running items-for-user and items-for-item Personalized Recommendations

Course Outline

1. Introduction to AI
2. Fusion Machine Learning Architecture
3. Signals in Fusion
4. Document Clustering
5. Classification: Documents and Query Intent
6. Experiments
7. Query Analytics and Natural Language Processing
8. Automated Recommendations

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Training Course: Fusion Developer 4.1

Duration: 12 hours

Target Persona(s)

Search Developer
Data Architect
Data Scientist
Search Project Manager

Recommended Audience

Search Developers, Data Architects, Data Scientists and Search Project Managers who are working on or considering a Fusion-based solution and want to fine-tune their Fusion applications to significantly improve search relevance and user experience will benefit from this course.

Course Summary

The Fusion Developer training course will teach you how to deliver powerful, intuitive search experiences at large internet scales. Expanding on topics introduced in the Fusion Server Foundations course, this course will teach you how to calibrate your search applications for optimal relevance. Explore Fusion's experimentation framework and the use of signals and telemetry to enhance user experiences and allow for in-depth usage analysis. This course also covers methods to implement custom JavaScript in Fusion Pipeline stages to build powerful and responsive scripts at Index and Query time that can enable you to ETL ingest data and satisfy custom query requirements. You will also be introduced to Fusion SQL, which enables self-serve analytics at massive scale. This course also provides comprehensive hands-on lab exercises to help solidify all the learning objectives.

Pre-Requisites

This training will introduce advanced Fusion Developer topics and requires attendees to first take the Fusion Server Foundations 4.1 course. Basic experience with Linux OS and command-line tools is helpful but not required.

Training Course: Fusion Developer 4.1

Duration: 12 hours

Skills and Concepts That You Will Learn

- Understand Fusion Relevance Algorithms and how to Improve Search Results Precision and Recall
- Understand Boost Factors and Functions to Increase Relevance
- Hands-on Review of Relevance and Using Parsers to Boost Fields, Queries and Functions
- Hands-on Working with Advanced Query-time Tools like Functions, Statistics and Advanced Faceting
- Understand Signals and User Telemetry and how to Leverage Them to Achieve Personalized Results
- Hands-on Review of Signals and Learning their Impact on Relevance and Personalization
- Understand the Fusion REST API Framework
- Hands-on Working with REST Methods to Create Applications, Pipelines, Collections and Ingest Data
- Understand the Jobs and Scheduling Framework in Fusion
- Understand Index and Query Profiles in Fusion
- Review of the Fusion Experiments Framework
- Hands-on Implementing an Experiments Job in Fusion
- Understand Fusion's JavaScript Engine to Develop Index/Query Time Custom Stages
- Hands-on Coding of JavaScript Stages in Fusion Pipelines
- Understand Fusion Relational SQL Capabilities
- Understanding the Spark Service in Fusion and its Use-cases
- Survey of Fusion SQL Engine to Leverage Analytics in Fusion
- Configuring and Optimizing Spark and Fusion SQL Engine
- Hands-on Connecting to Fusion Using a JDBC Client
- Hands-on ETL in Fusion Using Spark
- Hands-on Working with Fusion SQL Analytics

Course Outline

1. Achieving Search Relevance
2. Advanced Query Tools
3. Signals in Fusion
4. Fusion REST APIs
5. Fusion Jobs and Scheduling
6. Index and Query Profiles
7. Experiments
8. Fusion JavaScript
9. Fusion SQL and Spark

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Training Course: Fusion App Studio 4.1

Duration: 8 hours

Target Persona(s)

Search Developer

Front-end Developer

Search Project Manager

Recommended Audience

Search Project Managers, Front-end Developers and Search Application Developers who are working on or considering a Fusion-based solution and want to considerably reduce the development time to build a custom front-end application will benefit from this course.

Course Summary

The Lucidworks' Fusion App Studio training will teach you how to connect people with data by building beautiful, modern, front-end applications using App Studio. With this intuitive toolkit, full stack developers with limited UI experience can easily build custom applications in days rather than months. In this course, you will learn a powerful markup language that encapsulates commonly used UX patterns and see how it can be used to effectively present insights across multiple use cases and verticals. You will also explore wizard-driven templates that provide starter applications for use cases such as site search and enterprise search within minutes and learn how to tailor them to your needs. This course also provides comprehensive hands-on lab exercises to help solidify the learning objectives.

Pre-Requisites

This training requires attendees to first take the Fusion Server Foundations 4.1 course. Basic experience with Linux OS and command-line tools is helpful but not required.

Training Course: Fusion App Studio 4.1

Duration: 8 hours

Skills and Concepts That You Will Learn

- Understand UI Design Approaches and Goals
- Understand how to Use and Implement Search Pages like Results, Details & Dashboards
- Understand App Studio Architecture and Components
- Hand-on Review of the App Studio IDE
- Understand Page Layouts
- Hand-on Working with Layouts to Build Responsive Pages
- Understand how to Setup the Search Platform(s) with App Studio
- Understand how to Work with Query Results and Facets in App Studio
- Hands-on Developing a Search Results Page with Facets and Modify the Page Rendering for best UX
- Understand how to Configure Detail Pages in App Studio
- Hand-on Configuring Detail Page Components and Responsive Layouts
- Understand App Studio Multi-Query and Federation Capabilities
- Survey of App Studio Visualization Components
- Understand the Rendering of Advanced Chart Components in App Studio
- Hands-on Building a Dashboard in App Studio

Course Outline

1. Introduction UI Design
2. Basic UI Elements
3. Introduction to App Studio
4. Markup Basics: Layout
5. Markup Basics: Search and Facets
6. Configuring Details Page
7. Multi-query and Federation
8. Visualizations in App Studio
9. Markup Basics: Charts

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