



Synapse System Administration Course (Level I – Basic)

NSL-5DAC-SYSADM

Cost: \$6,000

INTENDED AUDIENCE:

This five day course is intended for *new* Synapse PACS Administrators and technical support staff who are unfamiliar with the Synapse product, it's architecture, operational considerations and systems management. While the course content and exercises are primarily targeted to owners of Synapse systems, a majority of the topics presented are fundamental to the administration and management of most PACS and in particular, web-based PACS.

TRAINING MATERIALS:

Each student is provided a training workbook for note taking, a USB memory stick with all PowerPoint presentations used during the five days of training and relevant System Administration supporting documents in electronic format. In addition, students are each provided a training computer to use during the five days of instruction. The computers are presented as workstations connected to a live, virtual, current release version of Synapse PACS. The PACS software is installed on a VMware virtualized platform on a training server in the classroom. The patient study database with which the student will work has anonymized studies representing many imaging modalities.

COURSE DESCRIPTION:

This course covers all the basic aspects of Synapse PACS administration and management. It consists of a series of topic lectures supplemented with animated, multimedia presentations and student exercises. The lecture topics include: a PACS Administrator's role and responsibilities; basic terminology applicable to all PACS and terms specific to the Synapse system; basic network terminology, Synapse user network authentication, using Microsoft's Remote Terminal Services to view the active directory, server logs and services, Fujifilm's remote Active Monitoring services; an in-depth review of the Synapse user interface and feature set; software components comprising the Synapse PACS; Synapse system architecture and how it relates to patient, study and image dataflow; Synapse system scalability and server management; archive storage management, hierarchical storage management (HSM) and a look at EMC/Legato's DiskXtender and MediaStor products (HSM software which is often purchased and used with Synapse); database backup strategies, disaster recovery and business continuation contingencies; how to install, uninstall, configure and manage Synapse network workstations; administration and workflow issues related to a typical RIS supported and non-RIS supported PACS implementation; an introduction to the HL7 protocol, related terminology and basic messaging constructs, discussion of RIS interfacing and RIS interface monitoring using the Synapse HIIS (Healthcare Information Interface System) monitor; an introduction to the DICOM protocol, related terminology and the importance of understanding transfer syntax with regard to connecting modality devices; managing the Fuji Object Oriented Database (FOOD) and Synapse system environment using SWAT (Synapse Web Administration Tool); scheduling/cancelling studies and database maintenance using the Synapse RIS Scheduler; causes of anomalous studies, how to identify their source and minimize them, correcting anomalous studies using Synapse drag/drop merge and reallocation capabilities; recording, tracking and communicating system related issues; planning, testing and managing product upgrades.

New features such as Enterprise SWAT or eSWAT, Content Management and Automated Content Deletion are introduced and discussed in detail. Extensive new client software properties are reviewed and identified at the enterprise, datasource, workstation and user level. The concept of centralized settings to enable true roaming profiles is discussed along with the mechanics of DocStore, a centralized database where user settings are stored.

Synapse System Administration Course (Level I – Basic) continued

OBJECTIVES

Upon the conclusion of this course, the student should be able to:

- Explain the roles and responsibilities of a Synapse PACS administrator and how to best delegate and distribute some of those responsibilities when/if it becomes necessary.
- Develop a procedure to log, track and report system related issues.
- understand basic network terminology, Synapse system network and domain requirements and how Synapse users are authenticated
- Understand the use of Remote Terminal Services and Fujifilm's new and proprietary remote Active Monitoring services for server administration and monitoring.
- Understand PACS terminology and terms which are more specific to the Synapse PACS product and web browser based applications.
- Articulate the services (programs) and software components that comprise Synapse; and, the dataflow between the various servers and
- Assist an end-user with navigating through the Synapse database folders and using some of the more common features and functions.
- Install, uninstall, configure and manage Synapse client software on workstations.
- Understand the fundamentals of the HL7 and DICOM protocols.
- Use the Synapse Web Administration Tool (SWAT) to:
 - Create and manage user Roles and Users
 - Manage user access rights to Folders
 - Create Event Based Forwarding (EBF) profiles
 - Create and manage Custom Folders (database views)
 - Configure and manage Event Logs
 - Trace misfiled patient images or series
 - Generate folder based reports
 - Manage other ancillary tables (Body Part Mapping, Related Procedure Codes, Procedure Codes, Commonview Matching Criteria, etc.)
- Understand the features and current limitations of eSWAT
 - articulate the differences between Enterprise and Datasource administration management levels
 - know what the various menu options do
- Understand what DocStore does, how it is updated and how it impacts roaming profiles
- Identify and resolve patient study anomalies. Understand how to identify anomaly sources and possible means to minimize or eliminate them. Understand the patient and study matching logic of Synapse.
- Use the *RIS Scheduler* application for scheduling/cancelling studies or resolving data inconsistencies in the Synapse database
- Know how to manually monitor system resources and identify potential problems (i.e., running out of storage space, storage servers not archiving, etc.)
- Know how to prepare, communicate and plan for a system upgrade.
- Know how to prepare an individualized daily, weekly, monthly and yearly task schedule (checklist) for prompting and managing periodic operational tasks
- Understand the difference between Disaster Recovery and Business Continuity strategies and contingencies.