



## Candelis Case Study

May 2018

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- Kimberly McKisson, Team Lead, Application Analyst III from Duke University's Image Management and Radiant Services.

**Location**  
Durham, NC

### **Candelis's Medical Informatics Platform allows the Duke University Medical Hospital System to Connect All of their Modalities and Facilities to Create a Seamless, Efficient Health Workplace**

#### **The Situation**

Duke University, based in Durham, NC, is consistently ranked among the top 10 of some 5,700 American hospitals by US News and World Report. Duke has three main hospitals: Duke University, Duke Regional, and Duke Raleigh Hospital, in addition to multiple clinics, urgent care centers, and surgical centers.

In 2017, Duke was looking to replace their existing out-of-warranty Candelis routers, and turned to Candelis for next steps on updating their two systems that serve their primary center and backup center. However, Duke was not using the Candelis routers to its fullest capacity, routing only CT protocols that were heavy hitters (8 modalities) with only 2 administrative personnel dedicated to their workplace efficiency.

#### **The Opportunity and Challenge**

Duke had recently moved their GE Centricity PACS database from a G3 network to a G4 network, prompting that all of their 400-plus modalities connected to the PACS system would have to change their ID in order to route images, such as those from cardiology and radiology exams. Without changing the IP address, the modalities would not recognize the new destination, hindering workplace functionality.

### Services

- Workflow/Visualization/Image and Object Management
- Fast routing capabilities
- Seamless integration of software application and image management system
- Timely and secure sharing of medical study objects
- Seamless integration of software application and image management system
- Cost-effective, and efficient solution for sharing data with radiologists, surgeons, physicians, nurses, and technologists
- Easy access for the hospital physicians to read radiology reports and images on a single platform
- Scalable Image and Object Management Archive

### Key Business Challenges

- Scalable and Seamless Tag Morphing
- Vendor Neutrality
- Super Routing

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### The Opportunity and Challenge (continued)

Duke was burdened by this daunting task of manually touching each modality to program an IP change. Doing so would be a huge undertaking, requiring many man hours and delays in workplace efficiency.

Additionally, Duke receives outside images from other multiple destinations that need to route through their GE PACS system. Last year, Duke had more than 1.5 million outpatient visits, with 75% of all their outpatient business involving imagery.

### The Solution

The Candelis team, working closely with the Duke Image Management and Radiant Services team, replaced Duke's old Candelis routers with updated, but the same equipment. This time, however, Duke was able to use the Candelis servers more completely as robust data super routers.

Additionally, the Candelis servers now function as the one point of change, thus allowing all 400-plus of their CT, MR, Vascular, Ultrasound, Diagnostic, Nuclear Medicine, and Powershare equipment to route through Candelis to access the GE Centricity PACS. This allows all the servers, including research servers, doctors' servers, and oncologist servers, to keep their existing programming.

"We went from a task of updating 400 modalities to only updating one server and now have only one point of updating for IE and AE Titles," said Kimberly McKisson, Team Lead, Application Analyst III from Duke University's Image Management and Radiant Services.

"All modalities are pointed to one IP as opposed to having to configure multiple PACS systems," McKisson added.

Through the Candelis system, Duke's entire healthcare system was transformed, as well as saving personnel time and costs that would have been spent updating all of their systems.

"From once being burdened with multiple facilities with numerous modalities and sometimes different patient data, we were able to streamline at one central data center, and increased Duke's efficiency and accuracy," said Mazi Razmjoo, Candelis Vice-President.

"I cannot stress enough how the Candelis team has been very supportive and instrumental to the success of our informatics system. They were very interested in developing this solution for us, tackled multiple issues, and worked closely to provide a solution," McKisson added.