

# Deploying the CFM Viewer software as a Citrix® application

## Background

The purpose of this white paper is to provide an understanding of the deployment and use of the Olympic Brainz Monitor's Enterprise Solution's Citrix based Remote Viewer application. This capability has allowed clinicians to remotely view the cerebral function monitoring data that is being captured in the NICU either onsite or while they are away from the hospital.

The Olympic Brainz Monitor provides for limited channel aEEG neonatal brain monitoring in the NICU and the Remote View Software provides clinicians with the capability to remotely review data being captured in the NICU and to consult with on-site clinicians who are providing care at the bedside.

## Demographic information

Maine Medical Center is the state's largest medical center, licensed for 637 beds and employing more than 6,000 people. Although Maine Medical Center and Maine Healthcare as a whole serve a wide range of clinical needs the demographics listed below are those more closely associated with the deployment of a Citrix Remote Viewer Application of the Olympic Brainz Monitor. Currently there are approximately 20 unique users with active accounts that have access to this application.

- Maine Medical Center
  - Barbara Bush Children's Hospital:
    - 31 Level III NICU beds and 20 Level II NICU beds caring for over 900 infants per year including as many as 200 transports per year from lower level care centers
    - Neonatal services
    - Neurology services
  - IT staffing supporting approximately 30,000 user accounts and 15,000 devices:
    - Deployment specialist
    - Maintenance specialists
    - Security specialists
    - Clinical application support specialists

## Citrix implementation overview

Goal: Users all receive the same OBM Viewer configuration, configured by the administrator, when launching the application. This could be further improved upon utilizing IFMEMBER for group validation/isolation for various configurations.

### Workflow 1: OBM administrators

OBM Admin runs a Citrix published application that is the scripted launch of the OBM Maintenance executable that does the following:

1. Copies current OBM Viewer (natus) profile from shared directory to the OBM-Admin %appdata%\natus profile location, if it exists
2. OBM maintenance launches
3. After OBM-admin makes config changes and upon exit of OBM maintenance
  1. Copies the new %appdata%\natus profile to a shared directory all Citrix servers

### Workflow 2: OBM users

OBM Users run a Citrix published application that is the scripted launch of the OBMViewer.exe that does the following:

1. Deletes current user %appdata%\natus profile bits, if it exists
2. Copies the OBM-admin configured OBM profile from the shared directory on the Citrix server to the current users %appdata%\natus profile location
3. Launches OBMViewer.exe

## Security

Inbound security threats and HIPAA concerns associated with remote access to patient data were mitigated due to the security measures built into Citrix server environment and the flexibility to lock and limit storage paths for patient data storage to the OBM Location Server and Archive location. Users are required to have a token plus User ID and PW to log onto the Citrix Server and have access to the data being displayed or stored on the Olympic Brainz monitor that is in the NICU.

## Biggest challenge

A complete Enterprise Solutions Guide is provided to explain the capabilities and guide IT staff in the setup and deployment. The guide was very helpful however the work of setting up of individual users was a bit of a challenge. The task was lessened by the internal development of an OBM Viewer Maintenance Script that standardized all of the user profiles and allows for consistency regardless of which of the two Citrix Servers they are logged into. Users who log into the Citrix Server via an internally developed Users OBM Viewer Launch script are served the standardized user profile.

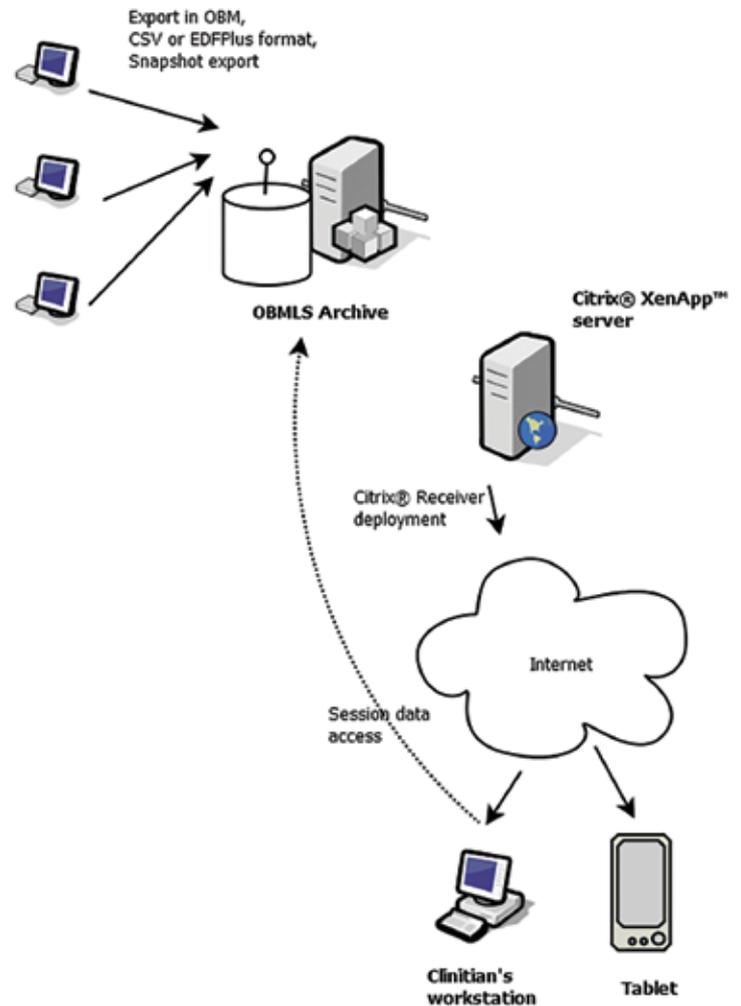
## Ongoing support

Maine Medical Center's IT support provides for ongoing clinical application support through individual clinical application owners. John Dobos, Systems Analyst, supports this particular application and states, "Once it was installed and the clinical users understood the operation of the application they were very happy with how simple it was to use. The result was a very minimal level of IT support and acceptance by the users."

### Adam Moreno

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## Export and review in OBMES



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