

# WORKSPACE

## A Cloud-Based Solution for Data Sharing and Collaboration to Advance Research and Healthcare

Clinical researchers, data scientists, engineers, and IT professionals are working to create a remote-access, cloud-based system called **Workspace**, where researchers can safely and compliantly access their research data virtually. Steven Wong, Director of Research Informatics Systems, says, "Investigators often struggle with the tension between safeguarding and sharing data securely with other researchers. Workspace creates a safe bubble in the cloud that facilitates collaborative research. Gone are the days when we are limited by bandwidth and hardware power because Workspace provides on-demand compute power within the data bubble while ensuring that the data is secure regardless of where you access it from."

Beyond safeguarding Personal Health Information (PHI) data, Workspace provides access to sizable compute capacity in the cloud, a functionality that data scientists will appreciate, as their work will no longer be limited by the CPU on their laptops. Yurima Guilarte-Walker, Director of Research Informatics Operations, says, "WorkSpace provides a flexible and effective channel to deliver data services to our research community. WorkSpace represents a new way of working for researchers by using a personalized user-driven technology that brings together all applications and tools to fulfill their research needs".

Thanks to a unique file-sharing management system called AWS FSx that links Workspace together, researchers can now collaborate worldwide. Thus, researchers will no longer depend on unsafe data-sharing practices, such as emails or thumb drives.

Over the past year, Dr. Adrian Zai (Chief Research Informatics Officer and UMCCTS Informatics Core Director), Steven Wong, Yurima Guilarte-Walker (Director of Research Informatics Operations), Paul Langlois (ACIO of Research Technology), Brian Coleman (ACIO of Information Security), and George Matthew (Senior Cloud Solution Developer) have been working jointly to implement this technology for the UMass Center for Clinical and Translational Science, funded in part through the NCATS Clinical and Translational Science Award (**UL1TR001453**).

"We hope to deliver multimodal research data, such as clinical, device, omics, and patient-reported outcomes data, into Workspace, where our investigators may, for example, develop artificial intelligence models to support clinical operations," says Dr. Zai. "We started our alpha testing phase with our colleagues from the Program in Digital Medicine and would like to extend our gratitude, particularly to Dr. Apurv Soni and Vikas Ramachandra, for providing us with valuable feedback and suggestions. I would also like to acknowledge the UMCCTS and CTSA for their support, without which this project wouldn't be possible," says Zai. Workspace is the first step of a broader initiative called Platform for a Learning Health System at UMass (PLUM), designed to bring our research informatics infrastructure into the next century.

