

Project LWH4DynAA: Lightweight ‘Sandbox’ Hosting for Academic Use of Microsoft Dynamics

Todd Schultz, PhD

Professor and Director, Computer and Information Sciences
Hull College of Business, Augusta University
Augusta, GA 30904 | tschultz@gru.edu | 706-667-4534

Ranida Harris, PhD

Associate Professor of Management Information Systems
School of Business, Indiana University Southeast
New Albany, IN 47150 | rbharris@ius.edu | 812-941-2324

Frederick J. Riggins, PhD

Associate Professor of Management Information Systems
Department of Accounting, Finance and Information Systems
College of Business, North Dakota State University
Fargo, ND 58108 | fred.riggins@ndsu.edu | 651-335-8417

Abstract: Hosting is a huge hurdle for academic adoption of Microsoft Dynamics, especially in the classroom and especially for those new to Dynamics and the Dynamics Academic Alliance (DynAA). This presentation introduces a project we call LWH4DynAA – Light Weight Hosting for Dynamics Academic Alliance. In recent practical demonstrations over two semesters we have established that the development and Microsoft Azure deployment of an appropriately configured VM (or virtual machine) has lessened this hurdle considerably, especially for light-weight classroom use of Dynamics. Although our direct experience is with Dynamics AX 2012 R3 this approach could also work for Dynamics GP and Dynamics NAV (as well as other flavors of Dynamics AX). We are now in a position to invite other DynAA members use our hosted Dynamics environments for lightweight (in terms of resource needs) student use at no-cost (or, perhaps, low-cost) to them (at least while capacity lasts). In addition we can provide guidance on the sorts of lightweight activities that are suitable including student completion instructions and assignments, instructor delivery and evaluation instructions, and grading rubrics.

PRESENTATION SYNOPSIS

Lightweight Hosting for Dynamics Academic Alliance (or LWH4DynAA) is simply our label for a collection of technologies and techniques for hosting Dynamics enterprise software. In a nutshell, we configure a virtual Microsoft Windows Server appropriately and using Azure virtual machines make it available for remoting and, perhaps, web access. LWH4DynAA focuses on academic or training use of Dynamics with some limits on the freedom, flexibility, robustness, and security a fully customized Dynamics installation might bring to a customer. Our design goal was to provide basic support for a wide variety of academic applications of Dynamics but at a very low technological and monetary hurdle for adoption.

In over one year of prototype experimentation involving several universities and serving over 300 students, LWH4DynAA succeeded in meeting its design goal. Broadening adoption and scaling up access are key opportunities and concerns moving forward. Keep in mind that although the software can be obtained at no cost, running the machines to host the software demands consistent funding. LWH4DynAA mitigates both the cost and access factors.

As it stands as of this writing, there are essentially three ways academics can use LWH4DynAA:

1. **Detailed guidance for deploying Dynamics and self-hosting.** To ‘do it yourself’ in the cloud we provide step-by-step documentation to get you there along with some hard earned tips & tricks along the way. *Prerequisites:* DynAA membership and software installations / licenses, Microsoft DreamSpark membership and software installations / licenses, consistent access to Azure resources.
2. **Receive a pre-configured virtual hard drive.** Part of the magic of virtualization is that once a computer has been configured to some desirable state, the computer’s ‘image’ can be copied. So instead of installing Dynamics and all the supporting infrastructure, a pre-configured image can be copied to an Azure account for self-hosting. *Prerequisites:* DynAA membership and software licenses, consistent access to Azure resources.
3. **Use someone’s ‘spare’ capacity.** If a cloud hosted VM with Dynamics installed is available 24/7 to students in courses at a university, much of time the VM is running it is highly underutilized. In controlled situations this capacity can be shared by providing logins for students from other courses or universities. This takes a bit of coordination and does not scale indefinitely but it does provide low hurdle access to Microsoft Dynamics. *Prerequisites:* None (technically) though being a DynAA member is probably expected

The remainder of this proceedings article contains an outline of the presentation. For current details and to explore and – perhaps – register to obtain relevant resources visit

<http://dynaa.azurewebsites.net/Hosting/>

OUTLINE OF PRESENTATION

Virtual Machines (VMs): Developing and sharing VM’s; VM’s in ‘the cloud’

A view from the students’ perspective: A review (and to the extent we have time and inclination, hands-on) of how this looks from a student perspective; in particular, managing remote access, starting programs, working within the systems; completing common and introductory ERP and BI tasks.

A view from the instructors’ perspective: Review common issues and concerns such as

How do I connect my students to the resource?

What do I present in class? How much of a course should I reserve? What assignments can / should I make? Are some materials available online? For what sorts of classes would this be suitable?

How do I know if students have completed the work; and how well did they do?

What if students run into difficulties, especially those I may not be able to handle?

How can this be no- or low-cost – hosting can be expensive and troublesome? What if I need or want to scale-up?

How do I get started? Visit <http://dynaa.azurewebsites.net/Hosting/> to register and explore the relevant resources.

The small print: This project represents Dynamics hosting by academics for academics. It is intended for instructors and students getting started in Dynamics and may not out-of-box provide the rich, heavy-weight, custom environment needed in advanced courses. But over time as we identify common needs and applications, the base VMs and exercises can be upgraded; in addition, obtaining a VM copy and hosting it provides some potential flexibility and capability beyond introductory use.