Domestication: The Next Step in Collaborative Application Design

<http://www.merriam-webster.com/dictionary/domestication>

**Definition of *DOMESTICATE (with a small addition)***

transitive verb

1**:** to bring into domestic use: adopt

2**:** to adapt (an animal or plant ***or application***) to life in intimate association with and to the advantage of humans

3**:** to make domestic**:** fit for domestic life

4**:** to bring to the level of ordinary people

— **do·mes·ti·ca·tion** \-ˌmes-ti-ˈkā-shən\ *noun*

Application Domestication is a phrase used to describe the possibilities beyond federation.  An application is generally considered federated when it can externalize its authentication.  More, however, is needed to make applications truly useful in the growing world of virtual organizations (VO) and inter-institutional collaboration.  Externalizing group information, authorization, and even profile information is the next bar to entry for truly useful collaborative applications.  This paper discusses application domestication from both a VO and a development perspective and reviews current activities around the creation of a wiki of domesticated applications.  It also captures the experiences and ideas from both Internet2's COmanage project as well as the COIN project at SURFnet

From a user’s perspective, a collaboration management platform (CMP) is only as useful as the applications tied in to it.  For all of the work going on behind the scenes in projects like SURFnet’s COIN and Internet2’s COmanage to create an entire identity management system geared towards the needs of virtual organizations, at the end of the day, it is how the applications tie in to the CMP and make collaboration easier for the user that is the key to a successful collaboration.  Of course, different applications can express or accept information about users in a wide variety of ways.  There is no standard at which to point developers that says, “here is how you should write your code to deal with the information we can provide.”   This is a space that needs the attention of the middleware community.

Lack of standards does not mean, however, lack of activity in this space.  Some applications are already highly domesticated.  Others are partially, or have taken an interesting interpretation to the idea. Since no one organization can be expected – or be able – to modify every application that their users require to have it accept all the necessary attribute and information from the CMP, efforts are being made to create an active list of what applications are ready, or almost ready, in the domestication sense.  This living list, a domestication wiki, is available online *<*<https://wiki.surfnetlabs.nl/display/domestication>*>* and is open to the community for input and feedback.  As application domestication is still heavily in development, the questions stands if the information in the domestication wiki for each application is sufficient for the community.

The role and mandate of each CMP effort is to facilitate collaboration among its user population.  By discussing the idea of domestication with the development community and being able to be clear on what information can be provided, we should be able to encourage the creation of richer set of collaborative applications, which will benefit all users of all platforms. This paper  brings more use-cases to the table to help clarify what application domestication can be, and how it is already taking over as what happens after federation.

 As more and more organizations look to expand their opportunities and experience by reaching out across all institutional boundaries to create virtual organizations, technology is expected to facilitate this work.  By offering guidance to application developers on what VO expect, and in creating platforms from which to tie the collaborative applications and VO-user identities together, researchers can focus on their research.  This paper will explore the strategies, use cases, and thoughts of production collaboration management platforms to facilitate that goal.

Keywords: federation, collaboration, CMP, Virtual Organization, domestication, application development

Author Biographies:

Heather Flanagan, Internet2

Heather Flanagan is the coordinator for the COmanage project, a collaboration management platform (CMP) effort funded out of a grant from the U.S. National Science Foundation (NSF) and Internet2. In her role, she works closely with representatives from VO to understand their use cases. That information in turn is both fed in to the COmanage effort and out in to the international community’s efforts around CMP. Prior to working with Internet2, Heather was Director for Systems at Stanford University where she was responsible for a variety of services, including authentication and Directory services.

Niels van Dijk, SURFnet  
Niels van Dijk is a Technical Product Manager in the Advances Services department of SURFnet. In this role he is responsible for technical management and innovation of SURFnets collaboration services.   
Within the COIN project, he acts as the technical lead for this innovative project which creates a collaboration platform that is a synergy between Federated Identity Management, Group management and Social networking. Before coming to SURFnet, Niels build some ten years of experience in designing and developing innovative solutions in the field of internet based database and GIS (Geographical Information Systems), mainly for the Utilities and Emergency Response sector.