

# FQDN/DNS Naming Standard

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## UIS Hostname, FQDN and sub-domain usage standard

System DNS names will be divided into the following three categories, so long as a contradicting or amending standard is approved:

1) Hostname and DNS qualification

<thematic-hostname>.<three-letter-location>.<mnging-dept>.georgetown.edu  
uter.pdc.uis.georgetown.edu

2) Service name and DNS qualification

a. Enterprise Service

<pubic-service>.georgetown.edu  
mail.georgetown.edu  
campus.georgetown.edu

b. Non-Enterprise Services or Load-Balanced Internal Service Names

<descriptive>-<instance>.<dept>.georgetown.edu  
extmailhub-prod-1.uis.georgetown.edu  
bboard-web-prod-2.uis.georgetown.edu

3) Networking Devices

Current naming standard remain.

# Hostname & FQDN Requirements Proposal

## Introduction:

Throughout the Enterprise Systems teams there is a lack of consistency in the determination and implementation of hostnames and fully qualified domain names. This lack of consistency has led to the use of many different sub-domains for both A and CNAME DNS records. In general there is no set policy and thus, no apparent standard as one looks across our install base.

In the interest of establishing a simpler, more consistent and easier to learn system of naming hosts, We have compiled a list of preliminary requirements and a set of solutions based on those requirements. The solutions are by no means complete they were meant only to address issues that arose when we reviewed the requirements listing.

The majority of the requirements are borrowed or adapted from either *Datacenter Naming Scheme* (May 2001) by Mark Garner of SUN Microsystems or RFC 1178: Choosing a Name for Your Computer by D. Libes.

## Naming Directives

1. All hosts being deployed by UIS (University Information Services) should be installed in the uis sub-domain. <hostname>.uis.georgetown.edu
2. Environment Sub-domains
  - a. Following the hostname requirements, there might be a need to identify how to specify development or quality assurance systems and the following can be used:  
Development systems: if it is necessary to link naming to the production system one should use a CNAME in a dev (development) sub-domain
    - <prodhostname>-qa.uis.georgetown.edu
    - <prodhostname>-dr.uis.georgetown.edu
    - <prodhostname>-dev.uis.georgetown.edu
3. Network function naming: Sun suggests <hostname>-<function> as such the following can be used.  
Options Backup Network
  - <hostname>-backup.uis.georgetown.eduOptions LOM Network
  - <hostname>-lom.uis.georgetown.edu
4. Service Names Sub-domains
  - a. Service sub-domains should be created for enterprise applications such as mail, document management, financials, Banner, etc.
  - b. Service sub-domains should contain CNAME records, not A records, or in the case of load balanced systems a pointer to the load balancer for that service.

- c. Service sub-domains should not contain hostnames. (i.e. HOSTNAME millhouse.uis.georgetown.edu okay; SRVNAME ecc.san.georgetown.edu okay; SRVNAME marzipan.san.georgetowne.edu NOT-okay)
- 5. Location Sub-domains & hostnames
  - a. Location hostnames are for use to provide easy searches by any person
  - b. Location sub-domains are meant for equipment so that it may easily be locate
  - c. Examples:
    - i. pdu1-b32.vdc.uis.georgetown.edu
    - ii. apc0.trb.uis.georgetown.edu
    - iii. t2000-26.pdc.uis.georgetown.edu (asset tag based cname)
- 6. For reference: main campus building codes can be found at  [<WHERE CAN WE FIND THESE?, I see they exist based on the abbreviations in the course listings: http://schedule.georgetown.edu/07C/07C147.html >](http://schedule.georgetown.edu/07C/07C147.html)

### Example DNS Record for a New Server

Production VMware ESX Server in Poulton

polaris.uis.georgetown.edu	IN	A	141.161.63.248
polaris.pdc.uis.georgetown.edu	IN	CNAME	polaris.uis.georgetown.edu
vm-container-prod -1.uis.georgetown.edu	IN	CNAME	polaris.uis.georgetown.edu
polaris-lom.uis.georgetown.edu	IN	A	10.14.15.16 (LOM PRIV NETWORK)
polaris-backup.uis.georgetown.edu	IN	A	10.240.10.248 (BACKUP PRIV NETWORK)

Development VMware ESX Server in Virginia

tritan.uis.georgetown.edu	IN	A	141.161.63.248
tritan.vdc.uis.georgetown.edu	IN	CNAME	tritan.uis.georgetown.edu
vm-container-dev-1.uis.georgetown.edu	IN	CNAME	tritan.uis.georgetown.edu
tritan-lom.uis.georgetown.edu	IN	A	10.15.16.17 (LOM PRIV NETWORK)
tritan-backup.uis.georgetown.edu	IN	A	10.240.10.248 (BACKUP PRIV NETWORK)