Carleton
U N I V E R S I T Y

Canada's Capital University

Policy Name:	Domain Name Services (DNS)
Originating/Responsible Department:	Information Technology Services (ITS)
Approval Authority:	Chief Information Officer (CIO)
Date of Original Policy:	February 2012
Last Updated:	February 2012
Mandatory Revision Date:	February 2017
Contact:	Director, Operations and Infrastructure, ITS

Policy:
ITS is responsible for providing institution-wide Domain Name Services (DNS) to the Carleton University community. This Policy outlines the principles and configuration of the service.

Purpose:
The purpose of this Policy is to define how sub-domains of the existing University DNS zones may be allocated and used as well as outline procedures for departments and organizations to acquire their own DNS zones.

Scope:
All Carleton University departments and affiliated groups.

Procedure:
Terminology
- DNS is an Internet service used to resolve system names to network addresses and vice versa
- Forward DNS queries resolve a FQDN (Fully Qualified Domain Name) i.e. www.carleton.ca to an IP address
- Reverse DNS queries resolve an IP address i.e. 134.117.6.21 to a FQDN i.e. www.carleton.ca
- MX DNS queries identify the mail servers willing to accept incoming email for a given domain
- ITS operates DNS services for forward zones Carleton.ca; mycarleton.ca and reverse zone 117.134.in-addr.arpa on behalf of the University

Mapping Within the Carleton.ca Domain
- Forward mapping entries for all systems in the Carleton.ca domain are maintained by ITS
- Reverse mapping entries for all systems resident in the Carleton University Public IP address range of 134.117.0.0/16 are maintained by ITS
- Organizations wishing to have mapping records created in either of these zones should make a request to the ITS Service Desk at 613-520-2600 x3700

Sub-Domains Within the Carleton.ca Domain
- Sub-domain names in the form xxxx.carleton.ca are acceptable provided that xxxx clearly and unambiguously identifies an organizational entity of the University such as a faculty, department or other affiliated unit. i.e. scs.carleton.ca, physics.carleton.ca
- Sub-domains may be completely delegated in that the University entity may choose to operate its own DNS servers for the forward sub-domain zone and associated IP address space
- Sub-domains may obtain the DNS hosting services from ITS without operating their own servers
- The creation of a sub-domain does not obligate ITS to provide either DNS hosting or virtual web hosting for the sub-domain
- Organizations wishing to create their own organization specific sub-domain of Carleton.ca should make a request to the ITS Service Desk at 613-520-2600 x3700

Domains Outside the Carleton.ca Domain
- University faculties, departments or other affiliated units must not operate DNS zones that do not fall within the Carleton.ca domain
- Exceptions may be made to accommodate specific University programs i.e. www.bitdegree.com, affiliated organizations i.e. www.engsoc.org, or joint ventures i.e. www.virtualventures.ca
- External domains that map DNS records onto IP addresses used at Carleton University are prohibited
- Organizations wishing to create their own external domain should make a request to the ITS Service Desk at 613-520-2600 x3700
- The creation of an external domain does not obligate ITS to provide either DNS hosting or virtual web hosting for the sub-domain – ITS can provide these services on a fee for service basis
- Organizations whose request to create an external domain is granted are responsible for the payment of all related registration fees and adherence to the policies of their designated Internet registrar

Operating Your Own DNS Server(s)
- University faculties, departments or other affiliated units can operate their own DNS servers if they so choose – the servers must comply with all other aspects of this Policy, including restrictions on sub-domains, and domains outside of Carleton.ca listed above
- To ensure the correct resolution of on-campus names, the servers should have a "forwarders" zone configured for forward lookup zone Carleton.ca, and reverse lookup zone 117.134.in-addr.arpa. Both zones should forward queries to ITS operated DNS servers at IP addresses 134.117.1.1, 134.117.242.35 and 134.117.1.11
- Organizations wishing to operate their own DNS server(s) should make a request to the ITS Service Desk at 613-520-2600 x3700

Compliance:
Non-compliance with this Policy may result in disciplinary action.

Contacts:
Director, Operations and Infrastructure, ITS

Links to related Policies:
http://carleton.ca/secretariat/policies/
- Acceptable Use Policy for Information Technology (IT)
- Information Technology (IT) Security