1. Technical requirement for Caching server:

No.	Items	Specification Requirement	Max	Min
			SCORE	
A	**Cache Engine**		**1000**	**800**
1	**Hardware specification**		**130**	**108**
	Equipment	Appliance based or Software + server based (box)	20	15
	CPU	Min: 2 Quad Core CPU, 2.0GHz, 4M Cache or equivalent (in case of software+server based).	20	15
	Memory	Min: 12 GB DDR3 RAM	10	10
	Storage	Separate HDD for OS and cache storage	10	8
		Min: 6x300 GB cache HDD disk, support RAID configuration	20	10
		Automatic detection of failed disk	10	10
		HDD hot swappable	10	10
	NIC	At least support 2*1000BASE-TX	20	20
	Power supply	-48V DC, dual power or AC 100-240V	10	10
2	**Performance**		**90**	**58**
	Throughput	Min: 500 Mbps Full duplex per box	20	20
	Concurent Connection	200.000 cps	20	15
	No. of objects storable	At least 400 Million object (min size 10Byte/ object)	20	15
	Max RAM cache	8GB (can fix RAM used for caching objects)	20	0
	Response time	Cache server must respone to clients less than 4 seconds in any case.	10	8
3	**Features**		**240**	**215**
	The Caching system must support operation mode below			
	Proxy Mode		10	10
	Reverse Mode		10	10
	Transparent Mode		30	30
	Hidden Mode		50	50
	The Caching system must support protocols below			
	HTTP		10	8
	HTTPS, SSL		10	8
	Ftp		10	8
	FLV on HTTP random access		10	8
	MMS and RSTP		10	8
	The equipments must support interconnection protocols with ICP, ICAP		10	8
	The equipments must support network protocols below		10	8
	IPv4, IPv6		5	4
	NTP, SNMP v1,2,3		5	4
	The proposed system must support to control cache object include set time expired, search, delete		5	4

		URL filtering feature must support filter based on		
		- IP (source/destination) address or group of IP address.	10	9
		- URL (or group of URL)	10	9
		- Above policies can be scheduling with events, date, hour…	10	9
		Other requirements:		
		Object Splitting	5	4
		Content Pre-loading	5	4
		Access Control	5	4
		Bypass	5	4
		URL Re-writing	5	4
4	**Expanded Reverse Cache Functions**		**140**	**131**
	Reverve virtual hosting	Host name header	5	4
		IP/port (multi-port, multi-IP)	5	4
	Origin Host Load-balancing	Round robin	5	5
		Packet load	5	5
		Address Hashing (WCCP)	20	20
		URL Hashing	20	20
		Least connections	10	10
		Dựa trên các thông tin về SNMP của hệ thống cache	5	5
		Response time	10	10
		Directory	20	20
	Connection Management	Persistent Connection	5	4
		Connection management Per Host	5	4
	Origin Host Fail-over	Excluding failed origin server after detecting malfunction	5	4
		Health-check at specific interval preset	5	4
	TTL management	TTL setting by matching of server name and extention	5	4
		TTL setting by matching of wildcard and Regular Expression	5	4
		Flexible setting of Max Age	5	4
5	**Mangement and Monitoring**		**320**	**216**
	The equiment must support GUI management interface with HTTPS protocol.		20	20
	Central Management	The proposal must offer central management (sofware and separated hardware if needed) for managing and monitoring all cache servers.	5	4
	CLI management tool	. Console	5	4
		. SSH remote access	5	0
		. Serial communication	5	4
	Licensing/Update	Online license registration	10	6
		Online update	10	6
		Roll-back function	10	6
	Log	Diverse format of Access Log	5	4
		Logging server must store the log file in to 3 months	40	0
		Log rolling per size; time of the day (provide daily	5	4

		logfile)		
		Log compression	20	0
		Log transfer through FTP	5	4
		Log classification per host	5	4
	Network	NIC configuration, duplex mode, speed	5	4
		Routing table management	5	4
		Access list controller	5	4
		NIC Bonding setting	5	4
		DNS setting	5	4
		NTP setting	5	4
	Administration	Administrator account/authorization setting	5	0
		Admin access control setting	5	4
	Status information	Cluster condition	5	4
		Service condtion	5	4
		Disk condition	5	4
		System condition	5	4
		Virus filtering information	5	4
	Object information	Stored object distribution	5	4
		Serviced objects distribution	5	4
		Searching of desired object information	5	4
	The central monitoring must support			
	Monitoring response time		10	10
	CPU, RAM, hardisks usage		10	10
	Client and server traffic		10	10
	Number of connection (client and server connection)		10	10
	Hit ratio		10	10
	No. request per second		10	10
	Throughtput and bandwith saving ratio		10	10
	Kind of cached objects.		10	10
	Make report of top domain, top client based on IP or domain		10	10
B	**Swich**		**80**	**72**
1	**Performance**		**35**	**35**
	Switching capacity	Min 240 Gbps	5	5
	Port density			
	Support at least 4*10GBASE-X		10	10
	Support at least 24*1000BASE-FX included SFP 1330nm, single mode		10	10
	Support at least 2*48*1000BASE-TX		10	10
2	**Features**		**25**	**21**
	VLAN	Supports access, trunk, and hybrid interfaces Supports the default VLAN Supports VLAN switching Supports QinQ and selective QinQ	10	10

	Routing	Support protocols: RIP, OSPF, BGP, and IS-IS	7	5
	MPLS	Support basic MPLS function, MPLS OAM, MPLS TE, MPLS VLL/VPLS	2	1
	STP	Supports STP, RSTP, and MSTP Protects BPDUs and root and prevents loops Supports BPDU tunnels	5	5
	MAC	Automatic learning and aging of MAC addresses Static, dynamic, and blackhole MAC address entries Filters packets based on source MAC addresses Restricts MAC address based on ports and VLANs	1	0
3	**QoS**		**5**	**4**
		Supports traffic classification (based on layer-2 protocol packet headers, layer-3, layer-4 protocols and 802.1p priority). Supports ACL, CAR, re-mark, and schedule. Supports the queue scheduling styles of PQ, WRR, DRR, PQ+WRR, and PQ+DRR. Supports the congestion avoidance mechanisms such as WRED and tail drop Supports traffic shaping		
4	**Security and management**		5	4
		802.1x authentication RADIUS and HWTACACS authentication for login users Protects the equipment against DoS attack, TCP SYN Flood attack, UDP Flood attack, broadcast storm, and heavy traffic attack. Supports the ping and tracert functions based on ICMP packets. Support RMON		
5	**Configuration and maintenance**		10	8
		Supports Console, Telnet, and SSH terminals Supports the network management protocols, such as SNMPv1/v2/v3 Supports file uploading and downloading through FTP and TFTP Supports BootROM upgrade and remote upgrade Supports hot patches Supports user operation logs		