BUILD ON

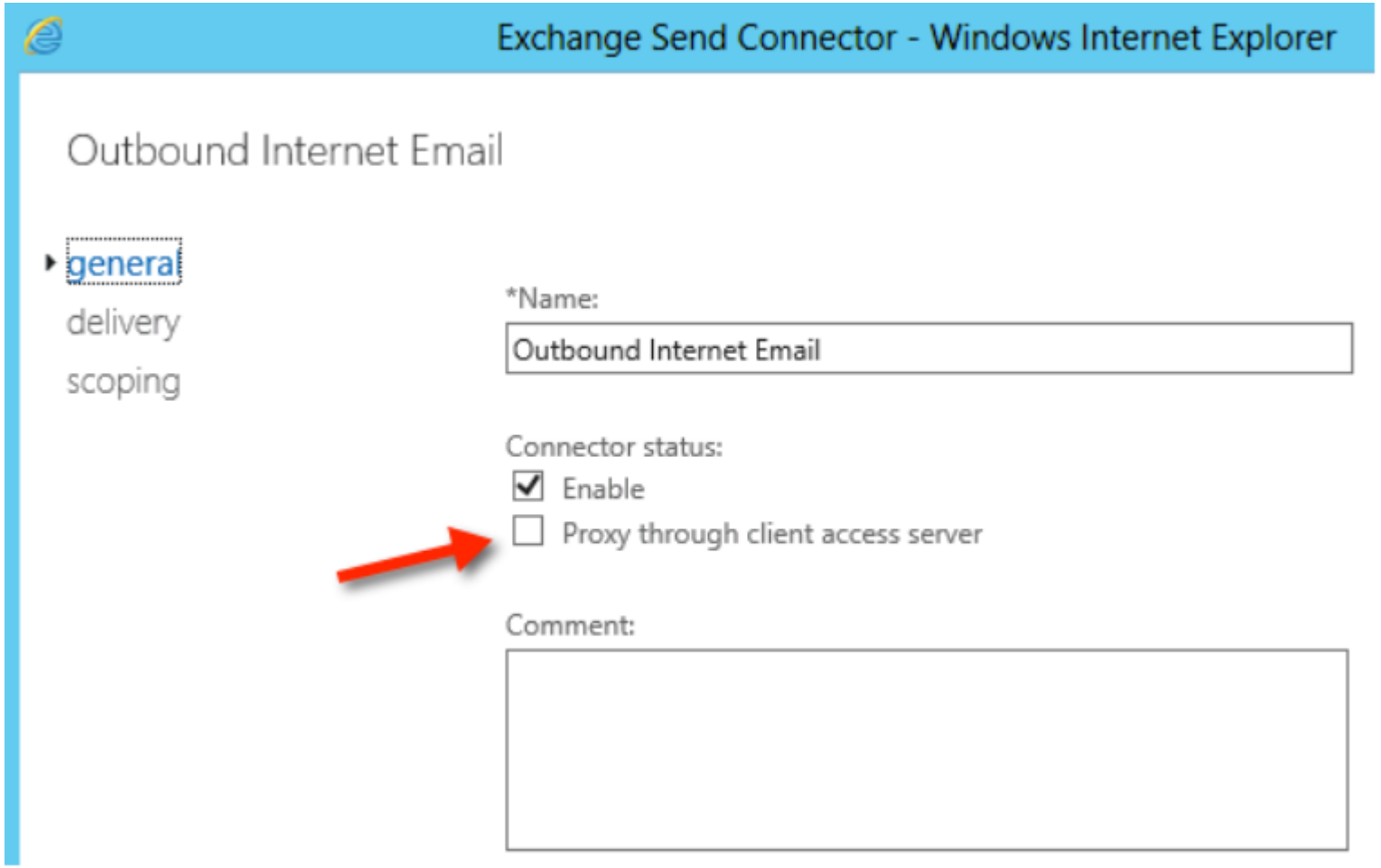
Additionnal Exchange 2013 informations for the Exchange 2013 Architecture course as well as the Exchange 2007/2010 to Exchange 2013 migration course

Sam F Drey

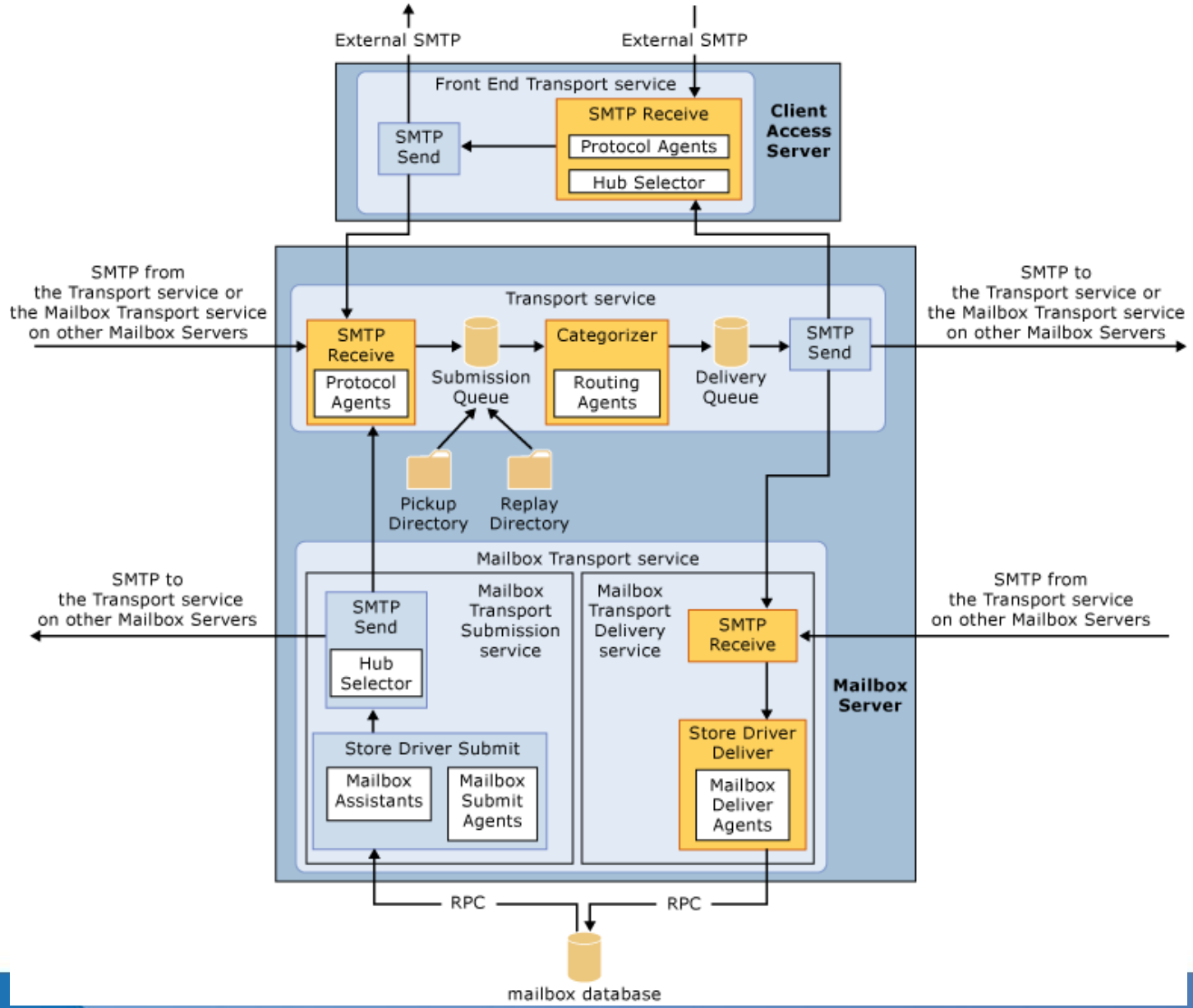
Microsoft Canada

Microsoft | Services

http://blogs.technet.com/b/exchange/archive/2013/01/25/exchange-2013-client-access-server-role.aspx



http://technet.microsoft.com/en-us/library/aa996349(v=exchg.150).aspx



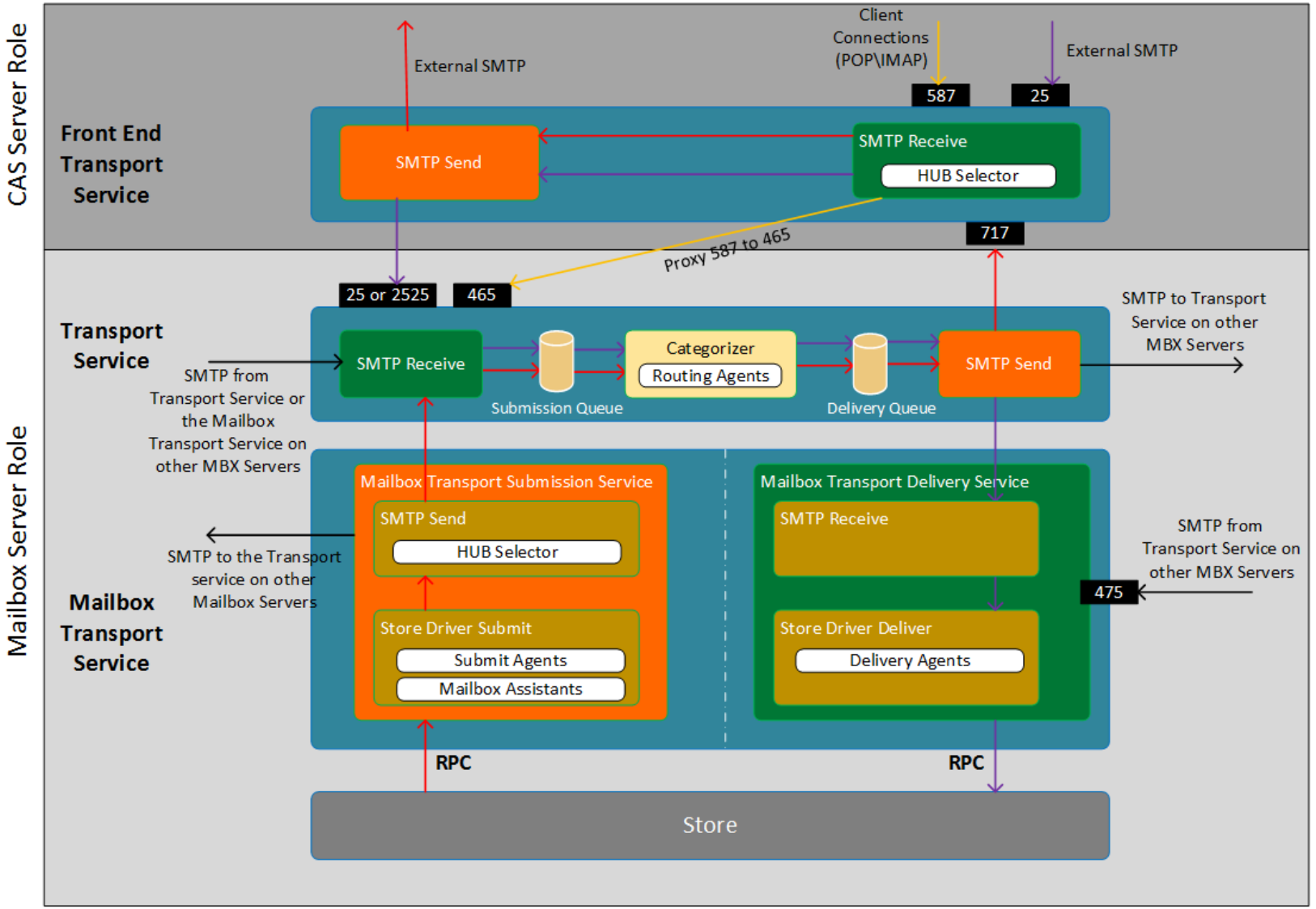
Understanding Exchange 2013 Transport flow and ports – high level

- **Original schema:**

http://blogs.technet.com/b/rischwen/archive/2013/03/13/exchange-2013-mail-flow-demystified-hopefully.aspx

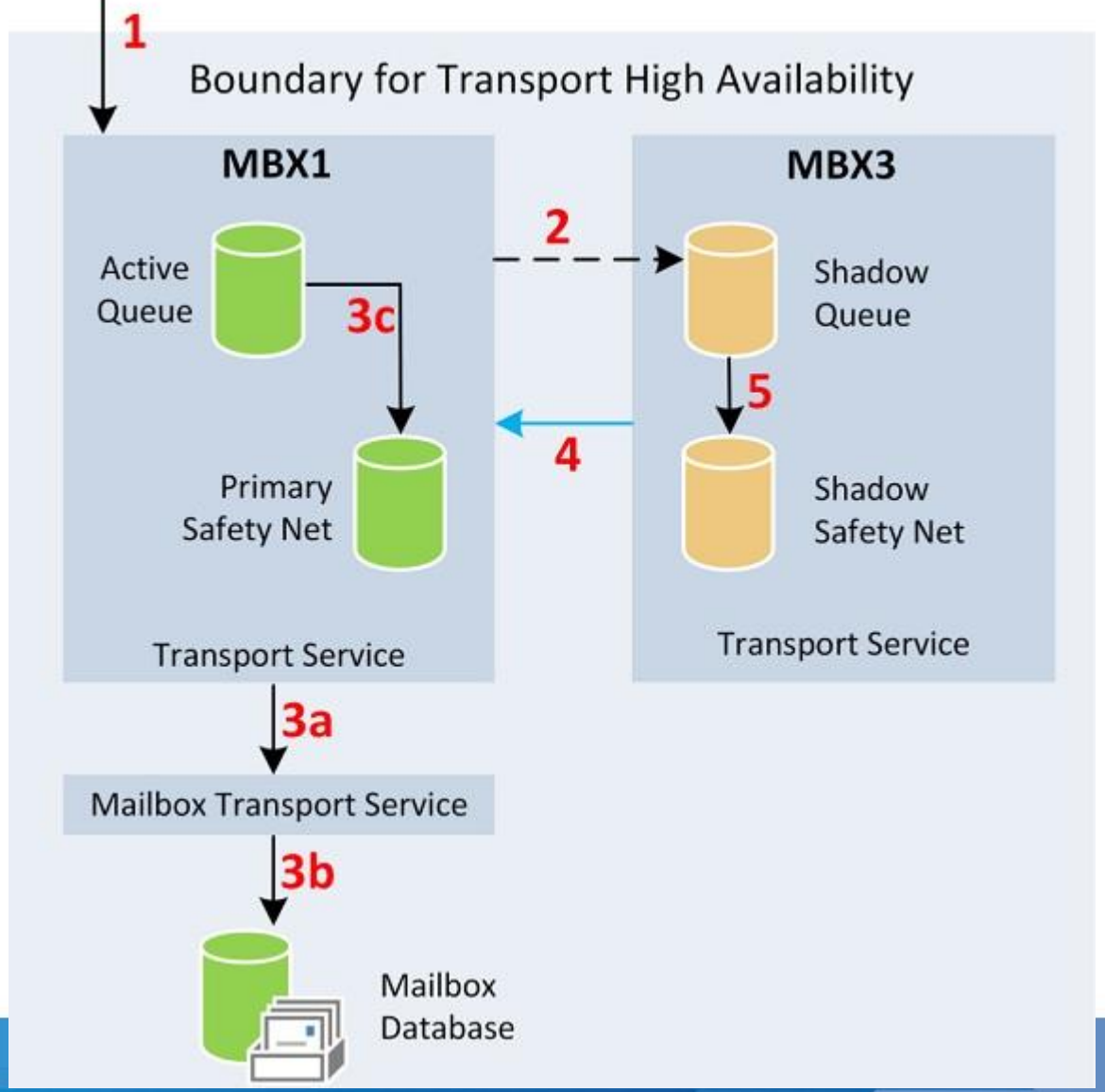
- **Annotated schema with EAC/EMS point of view:**

http://blogs.technet.com/b/samdrey/archive/2014/06/17/exchange-2013-mailflow-complement-to-richard-schwendiman-s-schema-get-receiveconnector-and-gui-correspondings-draft-showing-exchange-2013-receive-connectors-and-their-default-configuration-values.aspx



* Mailbox Server role and CAS Server role can be colocated on the same server. In this case all 3 Transport services would be on the same server
*Colored arrows depict Mail Flow. Similar colors show the Mail Flow Stream..

Trying to clarify the Exchange 2013 HUB Transport's « Safety Net » functionnalities {in previous Exchange versions it used to be called the « Transport Dumpster »}–in English in the below link, translated into French also in this slide



http://www.msexchange.org/articles-tutorials/exchange-server-2013/high-availability-recovery/transport-high-availability-exchange-2013-part1.html

1. MBX1 reçoit un message « externe » au DAG
2. MBX1 se connecte à MBX3. MBX1 garde la copie originale, MBX3 une autre dans sa « Shadow queue »
3. MBX1 traite le mail (a. TS -> Mailbox TS), délivre le mail (b. MTS -> DB)
   -c. MBX1 prépare un statut « discard » pour MBX3
   -cbis. MBX1 transfert le mail depuis sa dans sa file « Safety Net »
4. MBX3 vérifie MBX1 pour le statut du mail (regarde le statut « discard » en file d'attente de MBX1)
5. MBX3 trouve la confirmation de réception du mail de MBX1 (« discard »), place alors sa copie Shadow dans sa file « Safety Net »

Exchange 2013 SafetyNet and Shadow Redundancy settings

http://technet.microsoft.com/en-us/library/jj657495(v=exchg.150).aspx

Parameter	Default value	Description
SafetyNetHoldTime on **Set-TransportConfig**	2 days	The length of time successfully processed primary messages are stored in Primary Safety Net, and acknowledged shadow messages are stored in Shadow Safety Net. You can also specify this value in the Exchange Administration Center (EAC) at **Mail flow** > **Receive connectors** > **More options** ••• > **Organization transport settings** > **Safety Net** > **Safety Net hold time**. Unacknowledged shadow messages eventually expire from Shadow Safety Net after the sum of *SafetyNetHoldTime* and *MessageExpirationTimeout* on **Set-TransportService**. To avoid data loss during Safety Net resubmits, the value of *SafetyNetHoldTime* must be greater than or equal to the value of *ReplayLagTime* on **Set-MailboxDatabaseCopy** for the lagged copy of the mailbox database.
ReplayLagTime on **Set-MailboxDatabaseCopy**	Not configured	The amount of time that the Microsoft Exchange Replication service should wait before replaying log files that have been copied to the passive database copy. Setting this parameter to a value greater than 0 creates a lagged copy of the mailbox database. The maximum value is 14 days. To avoid data loss during Safety Net resubmits, the value of *ReplayLagTime* must be less than or equal to the value of *SafetyNetHoldTime* on **Set-TransportConfig** for the lagged copy of the mailbox database.
MessageExpirationTimeout on **Set-TransportService**	2 days	How long a message can remain in a queue before it expires.
ShadowRedundancyEnabled on **Set-TransportConfig**	`$true`	• `$true` enables shadow redundancy on all transport servers in the organization. • `$false` disables shadow redundancy on all transport servers in the organization. A redundant Safety Net requires shadow redundancy to be enabled.