Exchange 2007 SMTP namespace sharing and different relay domain types

Written by Marc Grote - mailto:grotem@it-training-grote.de

Abstract

In this article I will show you how to share your Exchange Server 2007 SMTP namespace with another messaging system. SMTP namespace sharing could be necessary when merger appears or if you only want to share the SMTP namespace with a foreign system. I will also show you how to create internal and external mail relay domains.

Let's begin

Let us assume for this article that you have two different Exchange organizations which are running Exchange Server 2007. These two organizations find together through a merger or acquisition and would like to share the SMTP namespace for a undefined period of time until both messaging systems are migrated to a single Exchange Server 2007 organization. The other part of this article deals with the configuration of internal and external mail relay domains and we assume that one Exchange organization is responsible for e-mail delivery to both domains (A.DOM and B.DOM).

Accepted Domains

When you create new accepted domains in Exchange Server 2007, you have to choice between the following domain types:

- Authoritative domain
- Internal relay domain
- External relay domain

An accepted domain is any SMTP namespace for which your Exchange Server 2007 organization is responsible for and for which you will send and receive e-mail. Microsoft calls this process "authoritative". You have to create authoritative domains in the Exchange Management Console or with the Exchange Management Shell.

Configuring Accepted Domains

Accepted domains are configured in the organization settings of the Exchange Management Console (EMC) which requires Exchange Organization administrator rights. Accepted domains will be created for the entire Exchange organization on Hub Transport Servers or Edge Transport Servers. If you have implemented the Edge Transport server role, Microsoft recommends that you synchronize the accepted domains from your internal Exchange organization with Edge Sync so you only have to create accepted domains once. Every new created accepted domain will be replicated to the Edge Transport server.

Authoritative domain

Exchange Server 2007 creates a new accepted domain during the installation of the first Hub Transport Server. The authoritative domain will be created with the internal Active Directory domain name and not with the registered SMTP domain name used by the Internet for sending and receiving e-mail. For example: If your internal Active Directory domain name is A.DOM and the registered SMTP domain name is A.COM, the accepted authoritative domain that will be created is A.DOM and you have to create an additional accepted authoritative SMTP domain for the registered SMTP domain.

Please note:

If you have an Exchange Server 2007 with the Edge server role installed, no accepted domains will be created automatically. You have to create authoritative domains manually or you have to synchronize these accepted domains from your internal Exchange organization with Edge sync.

SMTP namespace sharing

SMTP namespace sharing in Exchange Server 2007 is easier as in previous versions of Exchange Server. All you have to do is to create a new accepted domain from type Internal relay domain for the SMTP namespace that you want to share. As a second step you have to create a SMTP connector with the address space of the internal SMTP domain. The destination e-mail server must be a Hub Transport Server. The destination e-mail system is then responsible for generating NDR (Non Delivery Reports).

MX: A.DOM

Firewall

Edge Transport Server
Authoritative / Internal
Relay Domain: A.DOM

Firewall

Edge Transport Server

Firewall

Send Connector to A.DOM with address space A.DOM

Send Connector to A.DOM with address space A.DOM

HTS – A:DOM

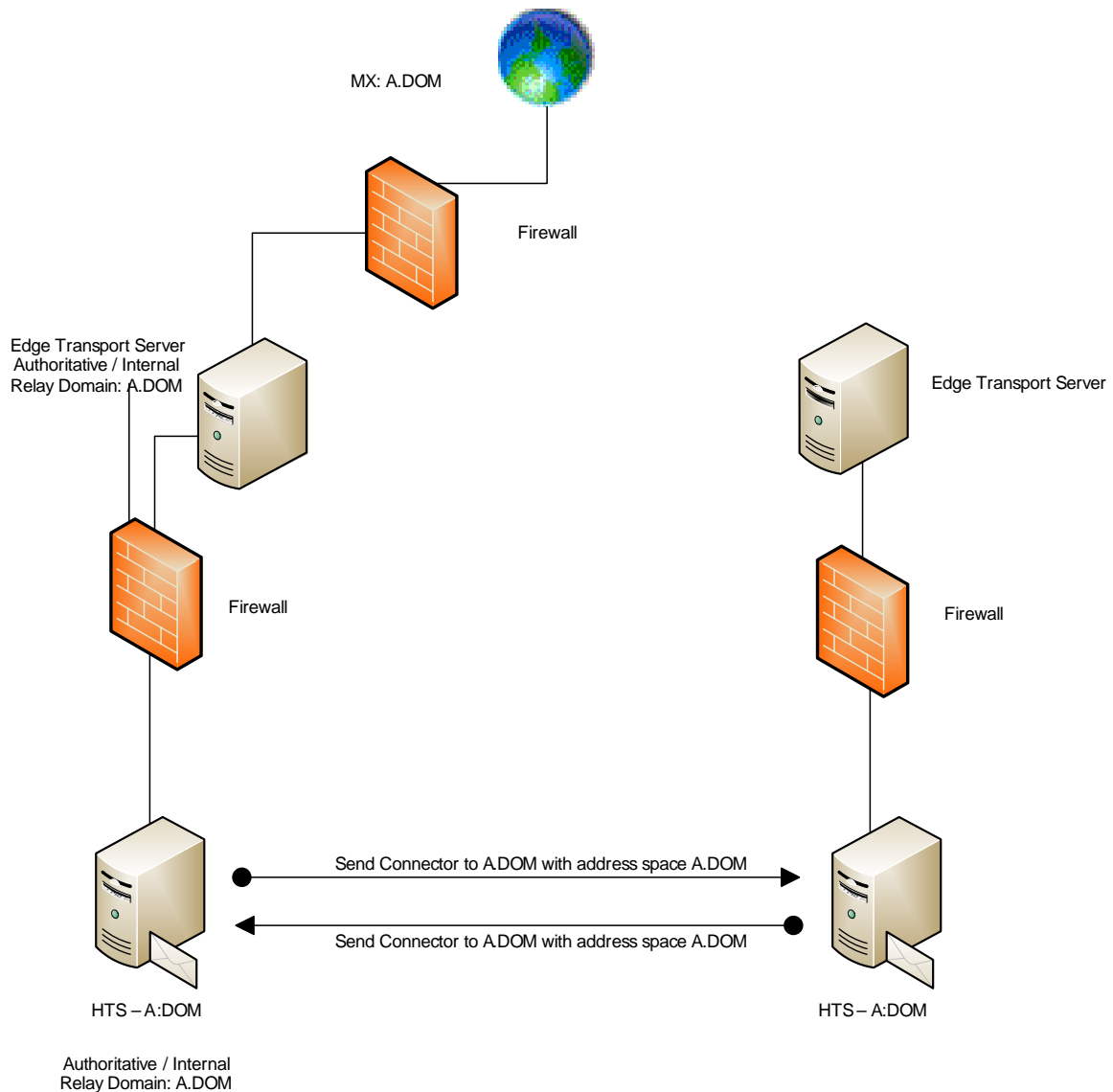HTS – A:DOM

Authoritative / Internal
Relay Domain: A.DOM

Figure 1: SMTP namespace sharing

As you can see in the picture above, Exchange accepts messages from A.DOM (the MX record points to the SMTP gateway). A Microsoft Edge Transport server forwards e-mails to the internal Hub Transport Server which tries to delivery e-mails to the recipients. If the recipient is not local Exchange looks for an SMTP connector with a corresponding address space (if the domain exists as a internal relay domain) and relays the message to this domain.

Relay Domains

If Exchange Server 2007 is not authoritative for a specific domain but the DNS MX record points to the Exchange Server organizations Hub Transport or Edge Transport server, the sending e-mail server relays e-mails to the Exchange organization. If the SMTP domain is not part of an authoritative domain, the sending server tries to relay through the Exchange server. Exchange Server 2007 accepts this message and relays it to an external e-mail domain or an internal relay domain.

Internal Relay Domain

If you configure an internal relay domain you will forward all e-mails which doesn't have a corresponding mailbox in the Exchange organization but which are contacts in that Exchange organization. The contacts have an e-mail address for the other messaging system. E-mail from the Internet is relayed for this domain through Hub Transport servers in this Exchange organization.

If your organization has two forests with Exchange Server 2007 installed and you want to share e-mails or you want to enable SMTP message flow between these Exchange organizations you must use a system that synchronizes e-mail addresses between these forests. For an example you can use IIFP (Identity Integration Feature Pack), a Microsoft solution which is free of charge or IIFPs big brother MIIS (Microsoft Identity Integration Server). E-mail messages from the Internet that are addressed to recipients in internal relay domains are received and processed by Edge Transport server (if implemented) and then relayed to the Hub Transport servers in the same Exchange organization. The Hub Transport server that is responsible for e-mail message routing, routes the message to a Hub Transport server in the other Exchange organization. All you have to do is to create a send connector at the Exchange organization that routes messages to the destination Exchange organization and a accepted domain from Internal relay txpe.
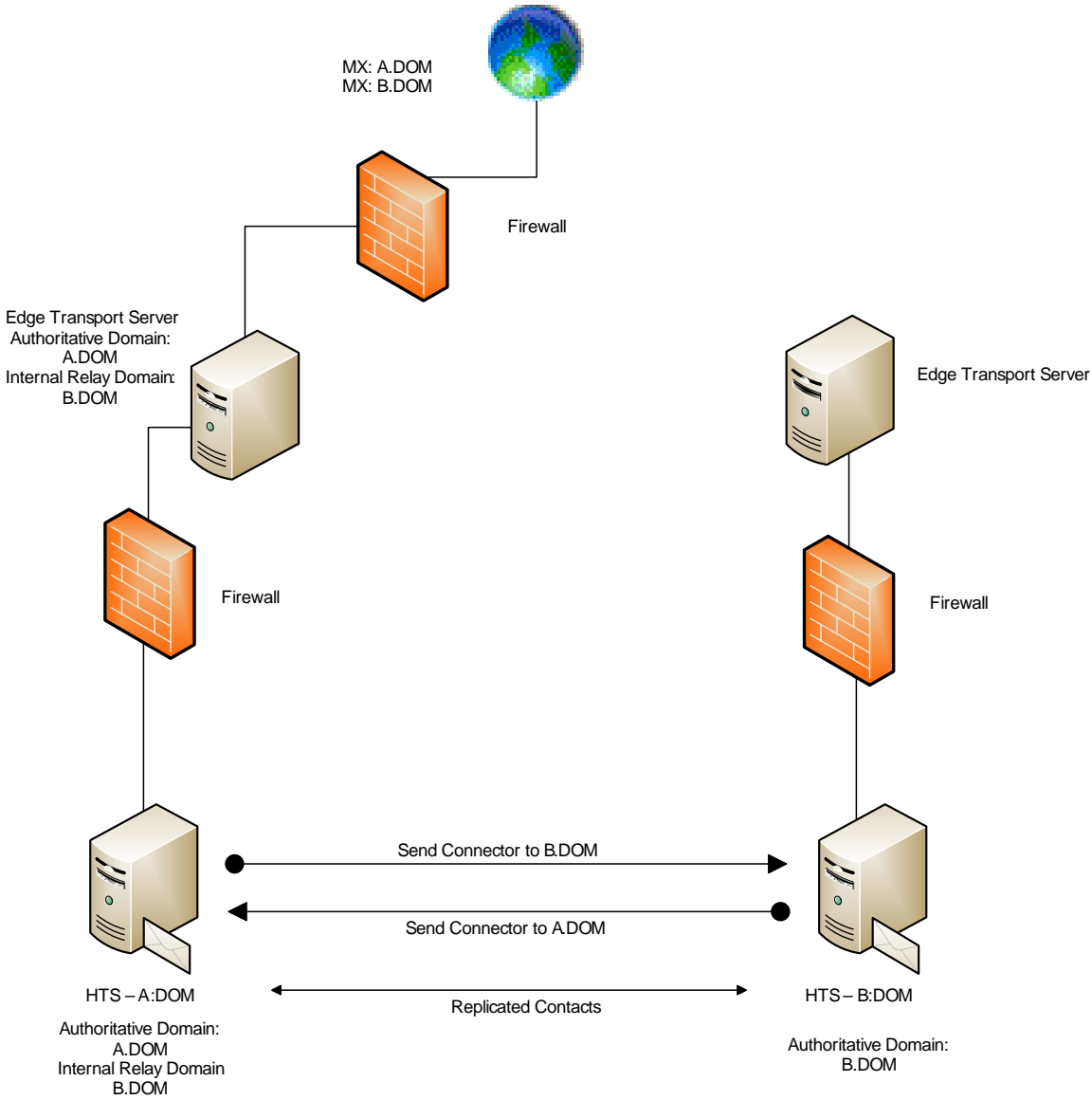
Figure 2: Internal relay domain

External Relay Domain

The external relay domain is a bit different than the internal relay domain. When you configure an external relay domain, messages are relayed to an e-mail server outside your Exchange organization. Messages to an external relay domain are relayed through an Exchange Server 2007 Edge Transport Server. This scenario is quite simple. The external relay domains MX (Mail Exchanger) record is configured to route e-mail to the Exchange 2007 organization. Exchange Server accepts e-mail messages for this domain name and will route messages to this domain through a SMTP send connector that you must configure. The send connector relays the message to the external relay domain.

MX: A.DOM
MX: B.DOM

Edge Transport Server
Authoritative Domain:
A.DOM
External Relay Domain:
B.DOM

Send Connector to B.DOM

Send Connector to A.DOM

Edge Transport Server

Firewall

HTS – A:DOM

Authoritative Domain:
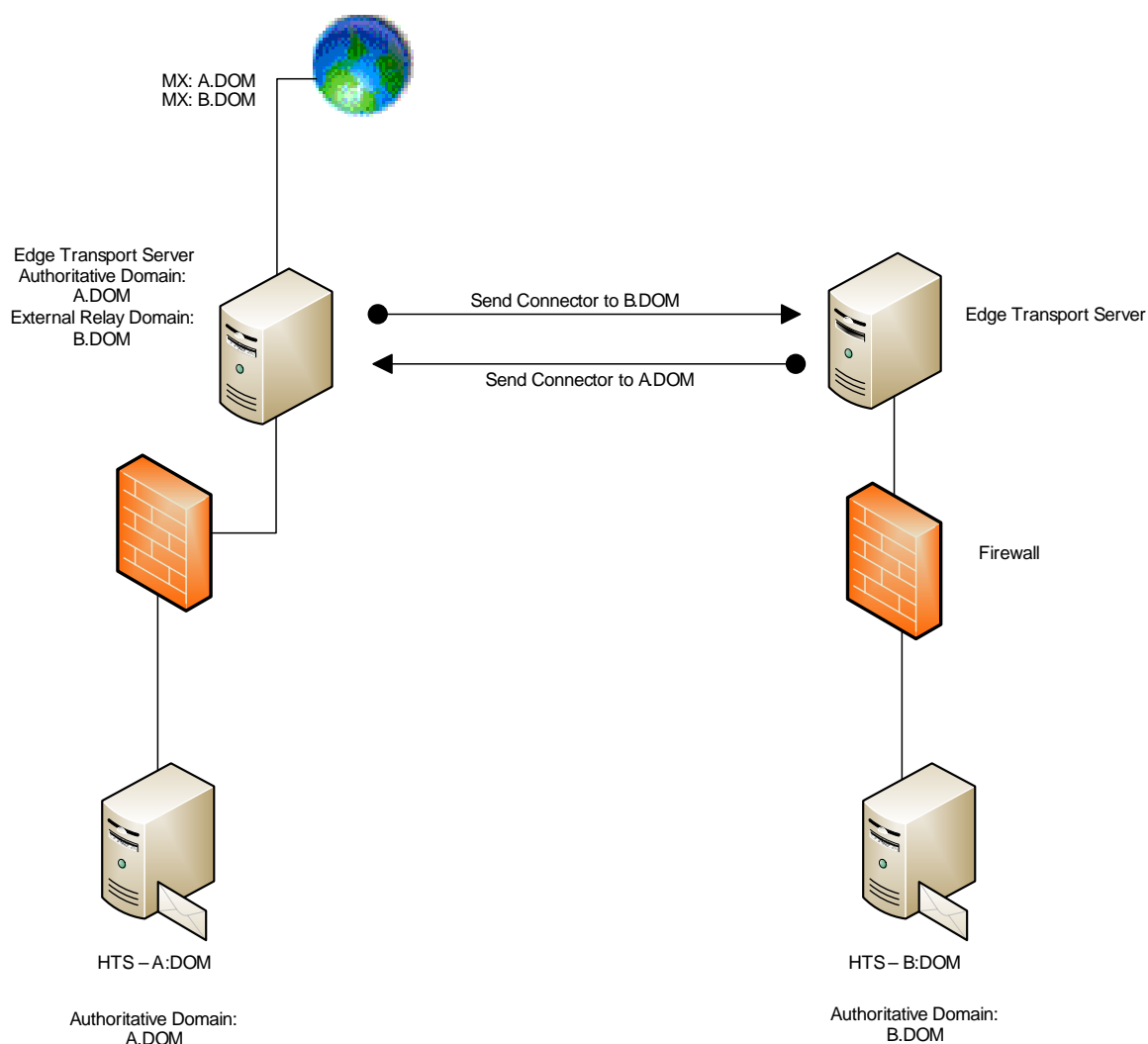A.DOM

HTS – B:DOM

Authoritative Domain:
B.DOM

Figure 3: External relay domain

Accepted Domains and E-Mail Address Policies

Before it is possible to receive e-mail for your Exchange organization you must create an SMTP address space and an e-mail address policy. When you create an accepted domain, you can use a wildcard character in the address space to indicate that all subdomains of the SMTP address space are also accepted by the Exchange

Server 2007 organization. For example if you want to configure the msexchange.org domain and all of its subdomains as accepted domains, enter *.msexchange.org as the SMTP address space.

The following picture shows how to create a new accepted SMTP domain.
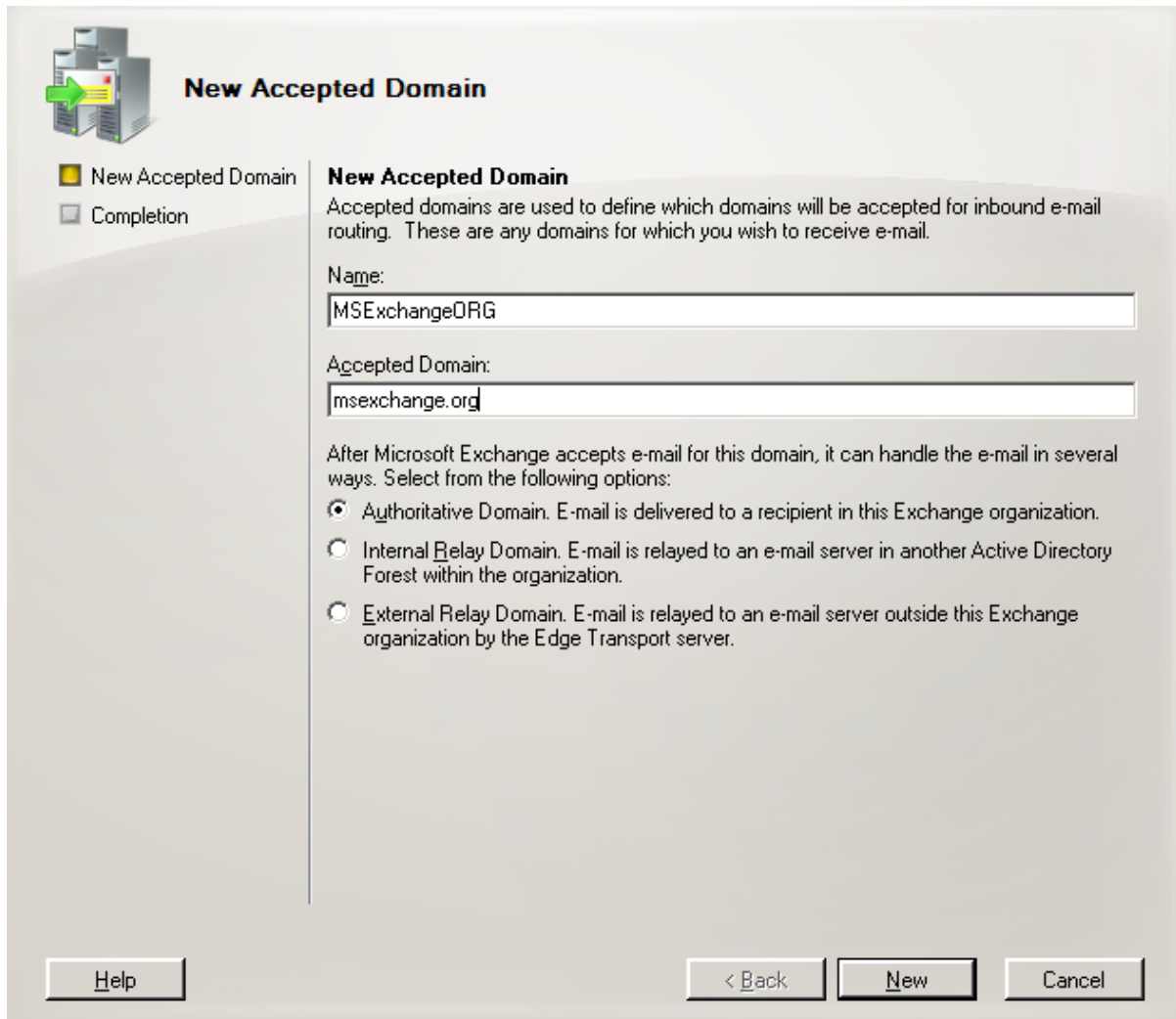

Figure 4: New accepted domain

You have to create at minimum one e-mail address policy for you internal SMTP domain name space that is used for provisioning of e-mail enabled objects in Exchange Server 2007.

Creating domains with the Exchange Management Shell (EMS)

Creating a new accepted authoritative domain:

New-AcceptedDomain -Name "MSExchangeORG" -DomainName msexchange.org - DomainType Authoritative

Creating a new internal relay domain:

New-AcceptedDomain -Name "IT Training Grote" -DomainName it-training-grote.de - DomainType InternalRelay

Creating a new external relay domain:

New-AcceptedDomain -Name "ISAServerORG" -DomainName isaserver.org - DomainType ExternalRelay

Conclusion

In this article I showed you how to establish a shared SMTP namespace for two different Exchange organizations and how to configure and use internal and external SMTP relay domains. Comparing with Exchange Server 2003 it is easier with Exchange Server 2007 to establish an SMTP shared namespace.

Related Links

Managing Accepted Domains
http://technet.microsoft.com/en-us/library/bb124423.aspx