

# 通过 Expressway 配置多个 CMS WebBridge

## Contents

[Introduction](#)

[Prerequisites](#)

[Requirements](#)

[Components Used](#)

[背景信息](#)

[Configure](#)

[Network Diagram](#)

[配置](#)

[Verify](#)

[Troubleshoot](#)

## Introduction

本文档介绍通过适用于 WebRTC 的 Expressway 配置、验证思科 Meeting Server (CMS) 的多个 Webbridge (WB) 以及对其进行故障排除的步骤。

## Prerequisites

### Requirements

Cisco 建议您了解以下主题：

- Expressway X8.11 及更高版本
- CMS 服务器 2.3 及更高版本
- [网络地址转换 \(NAT\)](#)
- 围绕 NAT 使用中继遍历 (TURN)
- NAT 会话遍历实用工具 (STUN)
- 域名系统 (DNS)

配置前提条件：

- 如需参阅通过 Expressway 配置单一 WB 代理的指南，请[点击此处](#)
- 所有 CMS 节点的数据库集群（[点击此处](#)获取配置指南）
- 在 CMS 上配置并启用 WB、可扩展消息传送和网真协议 (XMPP) 以及 CallBridge (CB)（[点击此处](#)获取配置指南）
- CB 节点集群（[点击此处](#)获取配置指南）

### Components Used

- Expressway X8.11
- CMS 2.3.4 (3 个节点)

The information in this document was created from the devices in a specific lab environment.如果

设置处于活动状态，请确保您了解任何命令或配置更改的潜在影响。

## 背景信息

Expressway 自版本 X8.11 开始添加了通过 Expressway 为具有多个 WB 的 WebRTC 代理提供支持的功能，以帮助实现 WB 的冗余和负载均衡。

X8.11 之前的版本仅支持负载均衡，如果 Expressway 选择的 WB 关闭，则连接会失败。

Expressway-C 利用访客账户客户端 URI 查询 DNS 来发现 WB IP 地址，从 X8.11 版本开始，再利用轮询机制将 WebRTC 连接均匀分布到这些 WB 中。

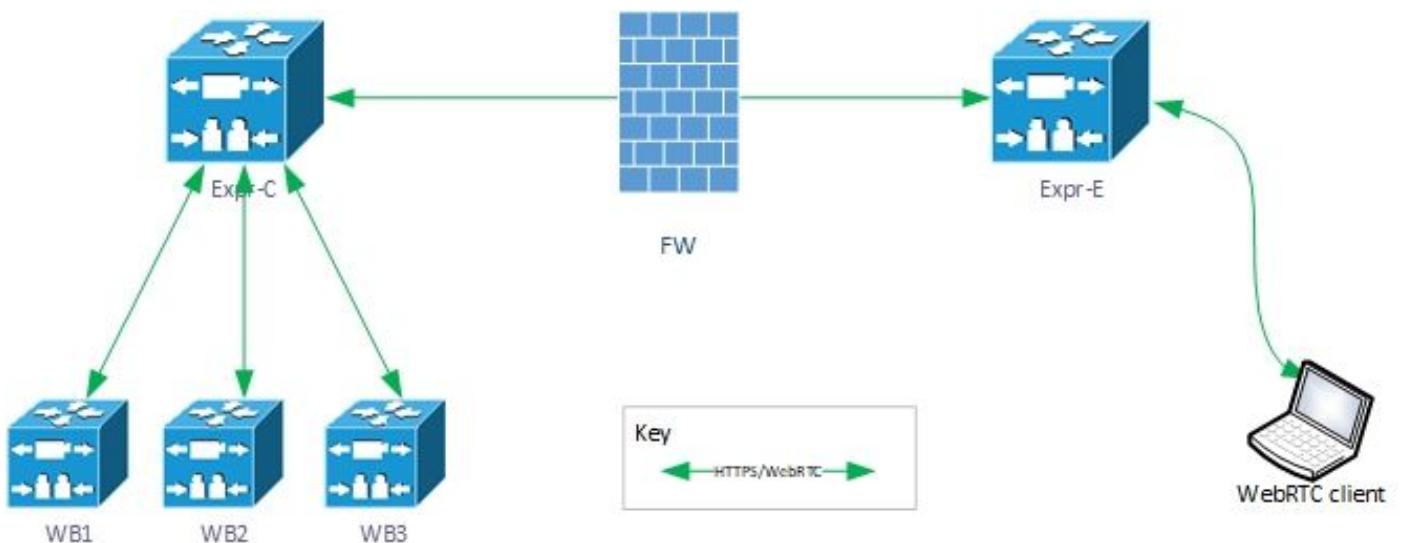
Expressway C 现在利用以下流程维护它获知的 WB 的 IP 地址动态列表。

- 利用访客账户客户端 URI 查询 DSN (每隔大约 60 分钟)，以便检测您部署的任何有意更改；例如，向服务 (SRV) 记录中添加或从中删除主机地址
- 然后，探测 DNS 返回的主机地址，看看是否可以接通以及是否是 WB (利用 API 调用)
- 如果地址无法连接，或者主机不是 WB，则 Expressway-C 会停止向该地址发送 WebRTC 连接，并且此类地址会在 Expressway-C 的 CMS 页面上标记为失败状态

**Note:**本文档重点介绍到 Expressway 上的多 WB 集成，而不是 WebRTC 代理的完整配置，这一内容可参见“配置前提条件”的第一条所述的指南。

## Configure

### Network Diagram



## 配置

1. 为访客账户客户端 URI 解析的每个 WB 节点配置以下 DNS SRV 记录：

在本示例中，配置了以下记录：

访客账户客户端 URI：`joinext.vngtp.cms`

WB1 FQDN：`cmsvngtp.vngtp.cms`

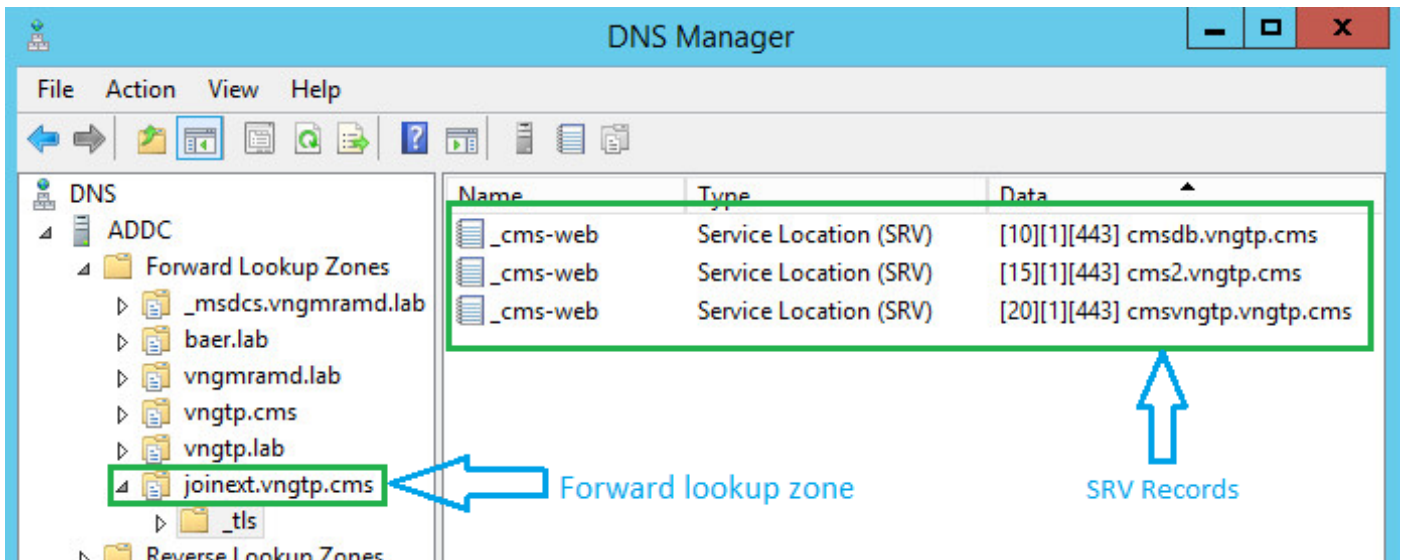
WB2 FQDN：`cms2.vngtp.cms`

WB3 FQDN：`cmsdb.vngtp.cms`

每个主机的完全限定域名 (FQDN) 配置有以下 DNS SRV 记录：

SRV 记录	端口	优先级	权重	解析结果
<code>_cms-web._tls.joinext.vngtp.cms</code>	443	20	1	<code>cmsvngtp.vngtp.cms</code>
<code>_cms-web._tls.joinext.vngtp.cms</code>	443	15	1	<code>cms2.vngtp.cms</code>
<code>_cms-web._tls.joinext.vngtp.cms</code>	443	10	1	<code>cmsdb.vngtp.cms</code>

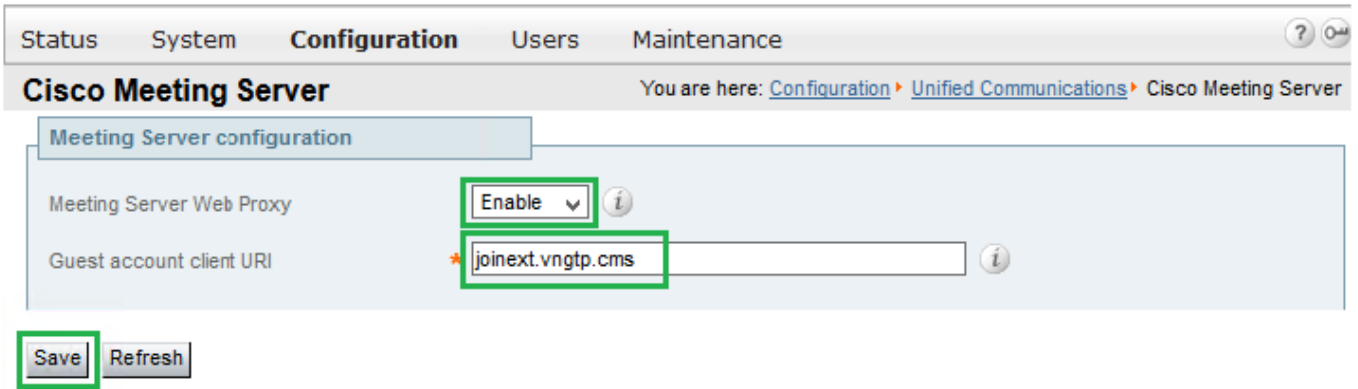
DNS 服务器的示例：



2. 利用外部 FQDN (外部通话方使用) 将 WB 集成到 Expressway-C 上：

- 导航至 **配置 > 统一通信 > 思科 Meeting Server**
- 在 **访客账户客户端 URI** 中输入 FQDN
- 然后选择 **保存**

下图中显示了一个示例：



## Verify

使用本部分可确认配置能否正常运行。

请进行检查，确保 Expressway-C 能够连接到 FQDN 解析的所有 WB。

导航至 **配置 > 统一通信 > 思科 Meeting Server**。

当 Expressway-C 能够连接 WB 后，状态将是**活动**，如下图所示：

Guest account client URI resolved to the following targets				
Name	Address	Priority	Weight	Status
joinext.vngtp.cms	192.168.1.66	20	1	Active
joinext.vngtp.cms	192.168.1.211	15	1	Active
joinext.vngtp.cms	192.168.1.212	10	1	Active

以下日志显示将 WB 添加到 Expressway-C 后出现的结果：

a. Expressway-C 在其数据库上为 Webbridge FQDN 创建了一个对象 UUID，用于执行命令：

```
2018-07-09T14:09:10.773+02:00 vcsc httpd[8724]: web: Event="System Configuration Changed"
Detail="commands/cmsadd/uuid - created with value: 'd86cf754-dc5c-438f-900f-51e5c702b94e'" Src-
ip="192.168.1.5" Src-port="51223" User="admin" Level="1" UTCTime="2018-07-09 12:09:10"
2018-07-09T14:09:10.773+02:00 vcsc httpd[8724]: web: Event="System Configuration Changed"
Detail="commands/cmsadd/time_started - created with value: '0'" Src-ip="192.168.1.5" Src-
port="51223" User="admin" Level="1" UTCTime="2018-07-09 12:09:10"
2018-07-09T14:09:10.773+02:00 vcsc httpd[8724]: web: Event="System Configuration Changed"
Detail="commands/cmsadd/time_finished - created with value: '0'" Src-ip="192.168.1.5" Src-
port="51223" User="admin" Level="1" UTCTime="2018-07-09 12:09:10"
2018-07-09T14:09:10.773+02:00 vcsc httpd[8724]: web: Event="System Configuration Changed"
Detail="commands/cmsadd/command_state - created with value: 'queued'" Src-ip="192.168.1.5" Src-
port="51223" User="admin" Level="1" UTCTime="2018-07-09 12:09:10"
2018-07-09T14:09:10.773+02:00 vcsc httpd[8724]: web: Event="System Configuration Changed"
Detail="commands/cmsadd/command_error - created with value: ''" Src-ip="192.168.1.5" Src-
port="51223" User="admin" Level="1" UTCTime="2018-07-09 12:09:10"
2018-07-09T14:09:10.773+02:00 vcsc httpd[8724]: web: Event="System Configuration Changed"
Detail="commands/cmsadd/name - created with value: 'joinext.vngtp.cms'" Src-ip="192.168.1.5"
Src-port="51223" User="admin" Level="1" UTCTime="2018-07-09 12:09:10"
```

b. 查询 DNS 的 SRV 记录 `_cms-web._tls.<WB_FQDN>`，在此示例中为 `_cms web._tls.joinext.vngtp.cms`：

2052018-07-09 12:09:11.029192.168.1.64192.168.1.61DNS91Standard query 0xfb10 SRV \_cms-web.\_tls.joinext.vngtp.cms

2062018-07-09 12:09:11.032192.168.1.61192.168.1.64DNS246Standard query response 0xfb10 SRV \_cms-web.\_tls.joinext.vngtp.cms SRV 15 1 443 cms2.vngtp.cms SRV 20 1 443 cmsvngtp.vngtp.cms SRV 10 1 443 cmsdb.vngtp.cms A 192.168.1.211 A 192.168.1.66 A 192.168.1.212

### c. 在其数据库中为每个与外部加入 URI (用于集成) 有关的 WB 创建单独的条目 :

2018-07-09T14:09:11.187+02:00 vcsc UTCTime="2018-07-09 12:09:11,187" Event="System Configuration Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration edgeCmsServerAddresses uuid cb7d5de8-1ab3-4a0d-a52a-8dbc885effeb name: joinext.vngtp.cms name: joinext.vngtp.cms"

2018-07-09T14:09:11.187+02:00 vcsc UTCTime="2018-07-09 12:09:11,187" Event="System Configuration Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration edgeCmsServerAddresses uuid cb7d5de8-1ab3-4a0d-a52a-8dbc885effeb name: joinext.vngtp.cms guid: **81db7b67-2aa9-4f64-8d74-04c4037397a8**"

2018-07-09T14:09:11.187+02:00 vcsc UTCTime="2018-07-09 12:09:11,187" Event="System Configuration Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration edgeCmsServerAddresses uuid cb7d5de8-1ab3-4a0d-a52a-8dbc885effeb name: joinext.vngtp.cms dnsname: **cms2.vngtp.cms**"

2018-07-09T14:09:11.187+02:00 vcsc UTCTime="2018-07-09 12:09:11,187" Event="System Configuration Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration edgeCmsServerAddresses uuid cb7d5de8-1ab3-4a0d-a52a-8dbc885effeb name: joinext.vngtp.cms address: **192.168.1.211**"

2018-07-09T14:09:11.187+02:00 vcsc UTCTime="2018-07-09 12:09:11,187" Event="System Configuration Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration edgeCmsServerAddresses uuid cb7d5de8-1ab3-4a0d-a52a-8dbc885effeb name: joinext.vngtp.cms priority: 15"

2018-07-09T14:09:11.187+02:00 vcsc UTCTime="2018-07-09 12:09:11,187" Event="System Configuration Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration edgeCmsServerAddresses uuid cb7d5de8-1ab3-4a0d-a52a-8dbc885effeb name: joinext.vngtp.cms weight: 1"

2018-07-09T14:09:11.187+02:00 vcsc UTCTime="2018-07-09 12:09:11,187" Event="System Configuration Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration edgeCmsServerAddresses uuid cb7d5de8-1ab3-4a0d-a52a-8dbc885effeb name: joinext.vngtp.cms port: 443"

2018-07-09T14:09:11.193+02:00 vcsc UTCTime="2018-07-09 12:09:11,193" Event="System Configuration Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration edgeCmsServerAddresses uuid 0408bdd0-9ada-45a0-834d-ccda166e8006 name: joinext.vngtp.cms name: joinext.vngtp.cms"

2018-07-09T14:09:11.193+02:00 vcsc UTCTime="2018-07-09 12:09:11,193" Event="System Configuration Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration edgeCmsServerAddresses uuid 0408bdd0-9ada-45a0-834d-ccda166e8006 name: joinext.vngtp.cms guid: **97d8fa86-7de4-4410-9767-7bc8b1eeaced**"

2018-07-09T14:09:11.193+02:00 vcsc UTCTime="2018-07-09 12:09:11,193" Event="System Configuration Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration edgeCmsServerAddresses uuid 0408bdd0-9ada-45a0-834d-ccda166e8006 name: joinext.vngtp.cms dnsname: **cmsvngtp.vngtp.cms**"

2018-07-09T14:09:11.193+02:00 vcsc UTCTime="2018-07-09 12:09:11,193" Event="System Configuration Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration edgeCmsServerAddresses uuid 0408bdd0-9ada-45a0-834d-ccda166e8006 name: joinext.vngtp.cms address: **192.168.1.66**"

2018-07-09T14:09:11.193+02:00 vcsc UTCTime="2018-07-09 12:09:11,193" Event="System Configuration Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration edgeCmsServerAddresses uuid 0408bdd0-9ada-45a0-834d-ccda166e8006 name: joinext.vngtp.cms priority: 20"

2018-07-09T14:09:11.193+02:00 vcsc UTCTime="2018-07-09 12:09:11,193" Event="System Configuration Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration edgeCmsServerAddresses uuid 0408bdd0-9ada-45a0-834d-ccda166e8006 name: joinext.vngtp.cms weight: 1"

2018-07-09T14:09:11.193+02:00 vcsc UTCTime="2018-07-09 12:09:11,193" Event="System Configuration

Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration  
edgeCmsServerAddresses uuid 0408bdd0-9ada-45a0-834d-ccda166e8006 name: joinext.vngtp.cms port:  
443"

2018-07-09T14:09:11.206+02:00 vcsc UTCTime="2018-07-09 12:09:11,206" Event="System Configuration  
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration  
edgeCmsServerAddresses uuid b151839e-a0dd-4176-bbed-ad28e05e9283 name: joinext.vngtp.cms name:  
joinext.vngtp.cms"

2018-07-09T14:09:11.206+02:00 vcsc UTCTime="2018-07-09 12:09:11,206" Event="System Configuration  
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration  
edgeCmsServerAddresses uuid b151839e-a0dd-4176-bbed-ad28e05e9283 name: joinext.vngtp.cms guid:  
**9c788380-6601-4dba-96e0-739511728369**"

2018-07-09T14:09:11.206+02:00 vcsc UTCTime="2018-07-09 12:09:11,206" Event="System Configuration  
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration  
edgeCmsServerAddresses uuid b151839e-a0dd-4176-bbed-ad28e05e9283 name: joinext.vngtp.cms  
dnsname: **cmsdb.vngtp.cms**"

2018-07-09T14:09:11.206+02:00 vcsc UTCTime="2018-07-09 12:09:11,206" Event="System Configuration  
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration  
edgeCmsServerAddresses uuid b151839e-a0dd-4176-bbed-ad28e05e9283 name: joinext.vngtp.cms  
address: **192.168.1.212**"

2018-07-09T14:09:11.206+02:00 vcsc UTCTime="2018-07-09 12:09:11,206" Event="System Configuration  
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration  
edgeCmsServerAddresses uuid b151839e-a0dd-4176-bbed-ad28e05e9283 name: joinext.vngtp.cms  
priority: 10"

2018-07-09T14:09:11.206+02:00 vcsc UTCTime="2018-07-09 12:09:11,206" Event="System Configuration  
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration  
edgeCmsServerAddresses uuid b151839e-a0dd-4176-bbed-ad28e05e9283 name: joinext.vngtp.cms weight:  
1"

2018-07-09T14:09:11.206+02:00 vcsc UTCTime="2018-07-09 12:09:11,206" Event="System Configuration  
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration  
edgeCmsServerAddresses uuid b151839e-a0dd-4176-bbed-ad28e05e9283 name: joinext.vngtp.cms port:  
443"

d. Expressway-C 为自动入站规则的 HTTP 允许列表中的 HTTPS 和 WebSocket 流量创建一般访问规则，获取 WB 的常规路径：

Type	Protocol	Ports	Match type	Path	Methods
Meeting Server web bridges	https	443	Prefix	/	GET, POST, PUT, HEAD, DELETE
Meeting Server web bridges	wss	443	Prefix	/	GET, POST, PUT, HEAD, DELETE

## Troubleshoot

本部分提供了可用于对配置进行故障排除的信息。

以下是将 WB 集成到 Expressway 上之后出现的一些典型问题：

1. 优先级和权重未显示在 Expressway-C 的 CMS 页面上，如下图所示：

Cisco Meeting Server You are here: [Configuration](#) > [Unified Communications](#) > Cisco Meeting Server

Meeting Server configuration

Meeting Server Web Proxy Enable ▼ ⓘ

Guest account client URI \*  ⓘ

Guest account client URI resolved to the following targets

Name	Address	Priority	Weight	Status
joinext.vngtp.cms	192.168.1.66	-	-	Active
joinext.vngtp.cms	192.168.1.211	-	-	Active
joinext.vngtp.cms	192.168.1.212	-	-	Active

所需的日志：

- 来自 Expressway-C 的包含 `tcpdump` 的诊断日志 导航至 **维护 > 诊断 > 诊断日志记录** 确保选中 **记录时包含 tcpdump**，然后选择开始新日志

要在日志中查找的内容：

a. 在诊断日志中：

- 利用文本编辑器（例如 **Notepad++**）打开诊断日志，然后利用在当前文档中查找全部 选项搜索加入 URL
- 您将在日志中看到，Expressway-C 未利用其实际 FQDN 创建单独的 WB UUID，而是利用常规加入 URL 执行这一操作，如以下日志片段所示：

```
2018-07-13T14:44:21.688+02:00 vcsc UTCTime="2018-07-13 12:44:21,688" Event="System Configuration Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration edgeCmsServerAddresses uuid 0ab708c9-4ce1-47b3-9bb6-2964baf39bb3 name: joinext.vngtp.cms guid: 97d8fa86-7de4-4410-9767-7bc8b1eeaced"
2018-07-13T14:44:21.688+02:00 vcsc UTCTime="2018-07-13 12:44:21,688" Event="System Configuration Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration edgeCmsServerAddresses uuid 0ab708c9-4ce1-47b3-9bb6-2964baf39bb3 name: joinext.vngtp.cms dnsname: joinext.vngtp.cms"
2018-07-13T14:44:21.688+02:00 vcsc UTCTime="2018-07-13 12:44:21,688" Event="System Configuration Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration edgeCmsServerAddresses uuid 0ab708c9-4ce1-47b3-9bb6-2964baf39bb3 name: joinext.vngtp.cms address: 192.168.1.66"
2018-07-13T14:44:21.688+02:00 vcsc UTCTime="2018-07-13 12:44:21,688" Event="System Configuration Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration edgeCmsServerAddresses uuid 0ab708c9-4ce1-47b3-9bb6-2964baf39bb3 name: joinext.vngtp.cms priority: 65536"
2018-07-13T14:44:21.688+02:00 vcsc UTCTime="2018-07-13 12:44:21,688" Event="System Configuration Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration edgeCmsServerAddresses uuid 0ab708c9-4ce1-47b3-9bb6-2964baf39bb3 name: joinext.vngtp.cms weight: 0"
2018-07-13T14:44:21.688+02:00 vcsc UTCTime="2018-07-13 12:44:21,688" Event="System Configuration Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration edgeCmsServerAddresses uuid 0ab708c9-4ce1-47b3-9bb6-2964baf39bb3 name: joinext.vngtp.cms port: 443"
2018-07-13T14:44:21.702+02:00 vcsc UTCTime="2018-07-13 12:44:21,702" Event="System Configuration Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration edgeCmsServerAddresses uuid 4b1b99fb-1b8f-400e-b066-d8906ffcd6fc name: joinext.vngtp.cms name: joinext.vngtp.cms"
2018-07-13T14:44:21.702+02:00 vcsc UTCTime="2018-07-13 12:44:21,702" Event="System Configuration Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>"
```



```

Detail="xconfiguration edgeCmsServerAddresses uuid 4b1b99fb-1b8f-400e-b066-d8906ffcd6fc name:
joinext.vngtp.cms guid: 81db7b67-2aa9-4f64-8d74-04c4037397a8"
2018-07-13T14:44:21.702+02:00 vcsc UTCTime="2018-07-13 12:44:21,702" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid 4b1b99fb-1b8f-400e-b066-d8906ffcd6fc name: joinext.vngtp.cms
dnsname: joinext.vngtp.cms"
2018-07-13T14:44:21.702+02:00 vcsc UTCTime="2018-07-13 12:44:21,702" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid 4b1b99fb-1b8f-400e-b066-d8906ffcd6fc name: joinext.vngtp.cms
address: 192.168.1.211"
2018-07-13T14:44:21.702+02:00 vcsc UTCTime="2018-07-13 12:44:21,702" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid 4b1b99fb-1b8f-400e-b066-d8906ffcd6fc name: joinext.vngtp.cms
priority: 65536"
2018-07-13T14:44:21.702+02:00 vcsc UTCTime="2018-07-13 12:44:21,702" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid 4b1b99fb-1b8f-400e-b066-d8906ffcd6fc name: joinext.vngtp.cms weight:
0"
2018-07-13T14:44:21.702+02:00 vcsc UTCTime="2018-07-13 12:44:21,702" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid 4b1b99fb-1b8f-400e-b066-d8906ffcd6fc name: joinext.vngtp.cms port:
443"
2018-07-13T14:44:21.706+02:00 vcsc UTCTime="2018-07-13 12:44:21,706" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid 6cc95c70-0636-4190-85f2-333b86b29c91 name: joinext.vngtp.cms name:
joinext.vngtp.cms" 2018-07-13T14:44:21.706+02:00 vcsc UTCTime="2018-07-13 12:44:21,706"
Event="System Configuration Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>"
Detail="xconfiguration edgeCmsServerAddresses uuid 6cc95c70-0636-4190-85f2-333b86b29c91 name:
joinext.vngtp.cms guid: 9c788380-6601-4dba-96e0-739511728369"
2018-07-13T14:44:21.706+02:00 vcsc UTCTime="2018-07-13 12:44:21,706" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid 6cc95c70-0636-4190-85f2-333b86b29c91 name: joinext.vngtp.cms
dnsname: joinext.vngtp.cms"
2018-07-13T14:44:21.706+02:00 vcsc UTCTime="2018-07-13 12:44:21,706" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid 6cc95c70-0636-4190-85f2-333b86b29c91 name: joinext.vngtp.cms
address: 192.168.1.212"
2018-07-13T14:44:21.706+02:00 vcsc UTCTime="2018-07-13 12:44:21,706" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid 6cc95c70-0636-4190-85f2-333b86b29c91 name: joinext.vngtp.cms
priority: 65536"
2018-07-13T14:44:21.706+02:00 vcsc UTCTime="2018-07-13 12:44:21,706" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid 6cc95c70-0636-4190-85f2-333b86b29c91 name: joinext.vngtp.cms weight:
0"
2018-07-13T14:44:21.706+02:00 vcsc UTCTime="2018-07-13 12:44:21,706" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid 6cc95c70-0636-4190-85f2-333b86b29c91 name: joinext.vngtp.cms port:
443"

```

## b. 在数据包捕获中：

- 利用字符串 **DNS** 进行过滤
- 您将在结果中看到，SRV 记录的 DNS 查询失败，如下图所示：

The screenshot shows a Wireshark capture of network traffic. The filter is set to 'dns'. The packet list pane shows several DNS packets. Packet 167 is highlighted with a red box, showing a failed SRV query for 'joinext.vngtp.cms'.

No.	Time	Source	Destination	Protocol	Length	Info
15	2018-07-13 12:44:07.963	192.168.1.64	192.168.1.61	DNS	74	Standard query 0x00a6 AAAA vcse.vngtp.lab
16	2018-07-13 12:44:07.963	192.168.1.61	192.168.1.64	DNS	135	Standard query response 0x00a6 AAAA vcse.vngtp.lab SOA addc.vngmramd.lab
112	2018-07-13 12:44:11.619	192.168.1.64	192.168.1.61	DNS	85	Standard query 0x13ea PTR 200.36.48.10.in-addr.arpa
130	2018-07-13 12:44:12.927	192.168.1.61	192.168.1.64	DNS	85	Standard query response 0x13ea Server failure PTR 200.36.48.10.in-addr.arpa
162	2018-07-13 12:44:17.931	192.168.1.64	192.168.1.61	DNS	85	Standard query 0xc823 PTR 200.36.48.10.in-addr.arpa
167	2018-07-13 12:44:21.568	192.168.1.64	192.168.1.61	DNS	91	Standard query 0xd373 SRV _cms-web._tls.joinext.vngtp.cms
168	2018-07-13 12:44:21.568	192.168.1.61	192.168.1.64	DNS	172	Standard query response 0xd373 No such name SRV _cms-web._tls.joinext.vngtp.cms SOA addc.vngmramd.lab
169	2018-07-13 12:44:21.569	192.168.1.64	192.168.1.61	DNS	104	Standard query 0x9792 SRV _cms-web._tls.joinext.vngtp.cms.vngmramd.lab



解决方案：

检查并确保 Expressway-C 使用的 DNS 服务器满足以下要求：

- 正向查找区域 (FLZ) 具有访客账户客户端 URI，不仅仅是 URI 中的域
- 确保此 FLZ 中配置了 SRV 记录 (`_cms-web._tls.<WB_FQDN>`)，并且包含相关的优先级和权重

2. 利用外部加入 URL 添加集群后，有一个或多个 WB 处于**活动状态**，如下图所示：

Guest account client URI resolved to the following targets				
Name	Address	Priority	Weight	Status
joinext.vngtp.cms	192.168.1.211	15	1	Active
joinext.vngtp.cms	192.168.1.212	20	1	Failed
joinext.vngtp.cms	192.168.1.66	10	1	Active

所需的日志：

- 来自 Expressway-C 的包含 `tcpdump` 的诊断日志
- 利用命令行界面 (CLI) 上的 `pcap <interface>` 命令后，服务器的数据包捕获显示**失败状态**（其中该接口正在侦听 WB 的接口）

要在日志中查找的内容：

a. 诊断日志：

- 利用失败 WB 的 IP 地址在**当前文档中查找全部**
- 此处的错误在日志中如下显示：

```
Detail="CMS check failed" Address="192.168.1.212", Error="[Errno 111] Connection refused"
```

b. 在数据包捕获中：

- 利用字符串 `ip.addr==<IP address of the failed WB>` 过滤数据包捕获
- 您将看到 Expressway-C 向 WB 发送的 TCP SYN 消息，在这种情况下，未收到任何 SYN-ACK 或 ACK，如此图所示：

No.	Time	Source	Destination	Protocol	Length	Info
301	2018-07-13 13:10:01.011	192.168.1.64	192.168.1.212	TCP	74	31630 → 443 [SYN] Seq=0 Win=29200 Len=0 MSS=1460 SACK_PERM=1 TSval=2866356001
302	2018-07-13 13:10:01.011	192.168.1.212	192.168.1.64	TCP	60	443 → 31630 [RST, ACK] Seq=1 Ack=1 Win=0 Len=0
1675	2018-07-13 13:15:01.048	192.168.1.64	192.168.1.212	TCP	74	31778 → 443 [SYN] Seq=0 Win=29200 Len=0 MSS=1460 SACK_PERM=1 TSval=2866656029
1676	2018-07-13 13:15:01.049	192.168.1.212	192.168.1.64	TCP	60	443 → 31778 [RST, ACK] Seq=1 Ack=1 Win=0 Len=0

- WB pcap 将显示已收到这些 TCP SYN 消息，但未发送任何回复（SYN-ACK 或 ACK）。

解决方案：

确保利用 CLI 上的 `webbridge enable` 命令在相应的 CMS 节点上启用 WB。