

Corente Cloud Services Exchange (CSX)

Corente Services Gateway Installation Checklist

Use this checklist to verify that you have the required hardware and software, and to make the necessary configuration changes to ensure a smooth and easy deployment of the Corente Services Gateway.

Bare-Metal Installation Hardware Specifications

A Corente CSX-compatible server or a pre-installed Corente Services Gateway for each location

The following are minimum requirements for the Corente Services Gateway hardware:

- **Processor:** 1 GHz Intel-based x86 compatible server (e.g. Pentium, Celeron, Core i7, etc.)
- **Memory:** 8 GB RAM
- **Hard Drive:** 100 GB IDE/SATA.
- Please consult Oracle Support if using a RAID drive.
- **Media Device:** CD/DVD (for CD installation) or USB Port (for USB flash drive installation)
- **Operating System:** Supplied by Oracle
- **Network Interface(s):** Integrated 10/100/1000M Ethernet Interfaces
 - One (1) for Peer configuration
 - Two (2) for Inline configuration
 - Three (3) for DMZ or Dual WAN configurations
 - One additional NIC for the failover back-channel if enabling Hardware Failover feature.

A monitor and keyboard

Users are required to input data at specific points during the installation process.

Access to the Internet at each location where a Corente Services Gateway will be installed

The Corente Services Gateway is compatible with any ISP and any type of Internet connection.

Client computer with the latest JRE installed

To access the services and administration portal, App Net Manager, the client computer must be on the same network as the Corente Services Gateway that you are creating. You will use this computer to configure and manage the Corente CSX network.

The computer also requires Oracle's Java Web Start application, which is available for download at:

<http://www.oracle.com/technetwork/systems/archive-download-142935.html>.

A portable USB flash drive (optional)

Depending on your choice of software and configuration file installation, you may need a portable USB flash drive in the FAT format with 100 MB or more.

Running the Corente Services Gateway on a Virtual Machine

If you would like to use a single server to supply multiple services at a site, the Corente Service Gateway software can be installed and run on a virtual machine (VM).

VM server requirements

The Corente service is compatible with the following VM servers:

- Oracle VM Server for x86 version 3.3.1
- Xen 4.4
- VMware ESX 5.5
- Citrix XenServer 6.2
- Microsoft Windows Server 2012 R2 Hyper-V

Running the Corente Services Gateway - Virtual Environment (CSG-VE) Edition

The Corente Services Gateway Virtual Environment (CVSG-VE) edition allows applications to be deployed securely to your locations by combining the Corente service and virtual application hosting servers in a single device. If you are deploying this option, use the following checklist:

CSG-VE hardware requirements

Hardware requirements for the CSG-VE vary greatly, depending on the guest OS and application required for each VM you will be installing.

The minimum requirements to support the host OS and Corente Virtual Services Gateway Software are:

- **Processor:** Minimum 2 GHz 64-bit (x64) Intel x86-based i7 system with VT Technology
- **Memory:** 8 GB
- **Hard Drive:** 40 GB hard disk.

Network Interface(s): Integrated 10/100/1000M Ethernet Interfaces

- One (1) for Peer configuration
- Two (2) for Inline configuration
- Three (3) for DMZ or Dual WAN configurations
- One additional NIC for the failover back-channel if enabling Hardware Failover feature.

It is the responsibility of the application developer to determine how these parameters should change based on guest OS and application requirements. The hardware needed will be roughly the sum of the hardware requirements for each installed VM, in addition to the minimum requirements stated above.

It should also be noted that once a machine has been created as a CSG-VE, it cannot be converted to an ordinary Corente Services Gateway (or vice versa) without reformatting the hard drive and performing a new installation onto that machine.

Oracle VM VirtualBox

VMs are created using Oracle VM VirtualBox version 4.3.12 or later, available at: <http://www.virtualbox.org>.

Requirements and instructions for VirtualBox are available at: <https://www.virtualbox.org/>.

Corente VMs will support the following guest operating systems:

- Microsoft Windows 7
- Solaris x86
- Linux (2.4 and 2.6) x86

Note: It is the responsibility of the VM creator to procure the correct licenses for VirtualBox and each chosen guest OS.

For more information, see the *Corente Service Gateway Virtual Environment* documentation on OTN:

<http://www.oracle.com/technetwork/server-storage/corente/documentation/index.html>

Corente Services Gateway Software Requirements

Your App Net Manager administration login ID/password

This login ID and password are obtained when you register for the Corente CSX service. You will use these credentials to login initially to App Net Manager Lite. Download App Net Manager Lite. Contact Oracle Support for the download link.

Corente Services Gateway software

Note: If you are using a pre-installed Corente Services Gateway, skip this step.

You have two options for obtaining the Corente Services Gateway software and installing it onto the Corente CSX server:

• USB Flash Drive Installation (Recommended)

This method of installation allows you to create a location gateway using a portable USB flash drive in the FAT format with 1 GB or more free space.

• CD Installation

You can create a software CD by downloading a software image (ISO file) of the Corente Services Gateway software.

Contact Oracle Support for the download links.

Corente Services Gateway configuration file

Each Corente Service Gateway requires a unique configuration file. You will create this (initial) file in **App Net Manager Lite**, and then do one of the following:

- Launch the **Download Location Wizard** in App Net Manager Lite to download the file to USB flash drive and load it onto the gateway hard drive.
- Download the file directly onto the location gateway hard drive during installation.

IP Address Configuration

Ensure that the following IP address rules are in place on your networks.

Follow these guidelines when assigning an IP address to your Corente Services Gateway:

- You are prohibited from assigning any of the following as either a LAN or WAN IP address:
 - 10.10.0.1
 - 10.0.0.1
 - 10.255.255.254
 - 10.255.255.253
 - 127.0.0.1 (loopback address)
 - 223.255.255.255
- You are prohibited from assigning any of the following as a LAN or WAN IP address, or to any hosts on the LAN:
 - 1.1.1.0
 - 1.1.1.1
 - 1.1.1.2
 - 1.1.1.3
- If your Location gateway is going to use an address in a 10.0.0.0 network range for either the LAN or WAN interfaces, the minimum allowed network mask is 255.128.0.0.
- The LAN interface **must** be assigned a private IP address.
- Inline Corente Services Gateways:** The WAN interface and the LAN interface **cannot** be on the same subnetwork.
- Check for IP address conflicts between each location or enable NAT**

Unique address spaces must be used at each site. When connecting two or more networks together, the address ranges of these networks cannot overlap. You can choose to enable Network Address Translation (NAT) on your Location gateways to resolve overlapping addresses. Corente provides three NAT options:

- **Outbound NAT** is enabled on a local address range so that when the range is made visible to remote Location partners, the range is re-mapped to a specified subnet.
- **Inbound NAT** is enabled on a Location partner so that when a partner's User Group is made visible to the local Location gateway, the User Group is re-mapped to a specified subnet.
- **Auto Resolve NAT** is enabled between partners so that if the address ranges of the partners ever overlap, each range is automatically remapped to another subnet.

Firewall Changes

If you have a firewall that shields your network, perform the following configurations. These are the **standard** firewall settings that are required for a Corente Services Gateway.

Configure the mandatory outbound settings on your firewall/proxy server:

- Permit traffic from Corente Services Gateway IP address to TCP port 443 of ANY IP address (for diskless gateway configuration download via HTTPS).
- Permit traffic from Corente Services Gateway IP address to UDP Port 53 of ANY IP address (for name resolution of the SCP via DNS).
- Permit TCP traffic from Source Port 1025–65535 of Corente Services Gateway IP address to TCP Destination Port 551 for ANY IP address (the Corente Service Port).
- Permit UDP traffic from Source Port 551 of Corente Services Gateway IP address to UDP Destination Port 551 ANY IP address (the Corente Service Port).

Configure the mandatory inbound settings on your firewall/proxy server:

- Permit TCP Source Port 1025–65535 from ANY IP address to TCP Destination Port 551 of Corente Services Gateway IP address (the Corente Service Port).
- Permit UDP Source Port 551 from ANY IP address to UDP Destination Port 551 of Corente Services Gateway IP address (the Corente Service Port)

Router Changes

If you have a router on your network, perform the following configurations:

- Add or modify static routes or enable RIPv2, OSPF, or BGP if you have multiple subnets in your network participating in the Corente CSX network.**

Routers must be configured to send all Corente network-bound traffic to the Corente Services Gateway. Alternatively, the location gateway can advertise routes for Corente network-bound traffic via the following dynamic routing protocols: RIPv2, OSPF and BGP.

- Add or modify static routes if you are using a backhaul client.**

When a Corente Services Gateway is set as a backhaul client (Inline configurations only), the routers must be modified to send all outgoing Internet packets to the Location gateway.

To use backhaul, at least one Corente Services Gateway on your Corente network must be set as a backhaul server.

- Peer Corente Services Gateways**

Route traffic from the machines on the LAN to remote locations on the Corente Services Gateway. For more information, refer to the **Corente Services Planning Guide** on OTN: <http://www.oracle.com/technetwork/server-storage/corente/documentation/index.html>.

For More Information

For more information on the Corente Services Gateway and Corente Services Gateway – Virtual Environment, go to OTN to view the documentation:





<http://www.oracle.com/technetwork/server-storage/corente/documentation/index.html>.



Oracle Corporation, World Headquarters
500 Oracle Parkway
Redwood Shores, CA 94065, USA

Worldwide Inquiries
Phone: +1.650.506.7000
Fax: +1.650.506.7200

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