

Crystal Enterprise

How to Configure CE to use SMTP

Overview

This document provides an understanding of how to configure Crystal Enterprise (CE) to work with a Simple Mail Transfer Protocol (SMTP) server.

The information in this document applies to CE 9.

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Introduction

This document contains information on the following topics:

- Configuring CE to work with SMTP email
- Limitations and known issues when working with SMTP
- Troubleshooting tips for common issues

What is SMTP?

SMTP is a part of the TCP/IP protocol suite and is used to transfer electronic mail over TCP/IP networks. With SMTP, many advanced features such as file attachments and the ability to send to multiple recipients is available.

The basic transmission for SMTP is an email sent from a client to an email server where it is then forwarded to the destination client(s). By default, SMTP uses port 25 for network communication. For more information on SMTP, search for **RFC 821** on the Internet.

CE and SMTP

CE 9 has the ability to distribute reports using SMTP as either a file attachment in an email or a link to the report instance in the body of the email message. CE allows you to specify the recipient(s), subject, body of the email message, and more.

CE acts as an email client when reports are sent out using SMTP. The email is forwarded to an SMTP server and the SMTP server handles the email distribution.

Supported SMTP Servers

As of this writing, the only fully tested SMTP server is Microsoft Exchange. Though other SMTP servers may work, they have not been fully tested and can produce unpredictable behavior.

How to verify that your SMTP Server can function with CE

To verify that an SMTP server can function with CE, complete the following steps:

NOTE	<p>The steps outlined below use the Default SMTP Virtual Server included with the Microsoft Windows 2000 Server Internet Service Manager.</p> <p>The Default SMTP Virtual Server for Windows 2000 must be configured correctly for successful e-mail delivery. For further information regarding how to configure the Default SMTP Virtual Server, refer to the Microsoft Knowledge Base Article Q293800. The Microsoft Knowledge Base Article can be found on the Microsoft Support Site at:</p> <p>http://www.microsoft.com</p>
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1. Go to **Start > Run** and type “cmd” (without the quotation marks). This opens the Command Prompt window.
2. In the Command Prompt window, telnet to the SMTP server using the SMTP server name and the port the SMTP server is configured to use.

For example, to telnet to the SMTP server called 'mailman', which uses port 25, type the following command in the Command Prompt window:

```
telnet mailman 25
```

The SMTP server will return a message similar to the message below:

```
220 mailman Microsoft ESMTP MAIL Service, Version: 5.0.2195.2966 ready at
Wed, 24 Apr 2002 17:10:37 -0400
```

3. After the SMTP server returns a message similar to the one in step two, type the following commands in the Command Prompt window:

```
helo hi<Enter>
mail from: Email_Address<Enter>
rcpt to: Email_Address<Enter>
data<Enter>
This is a test<Enter>
.<Enter>
quit<Enter>
```

The following variables are used in the commands above:

- <Enter> indicates that you have to press the 'Enter' key on your keyboard.
- **Email_Address** must be replaced with your valid email address.

NOTE	When you type the commands they will not appear in the Command Prompt window. They will not be visible as you type them. Each time you press the 'Enter' key on your keyboard the SMTP server will return a message indicating whether it has recognized your request.
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4. Check the inbox of the email address you submitted for the email address you provided for 'Email_Address'.

If your SMTP Server uses standard SMTP requests and the SMTP server is configured properly, the test e-mail will arrive in the inbox of the address you specified.

If the email arrives, the SMTP server is valid for use with CE.

Email Sweeping utilities

If an email sweeping utility, such as **Mail Sweeper** is running on the SMTP server, report files may fail to reach their destination. The sweeping utility traps the email because CE does not close the Multi-Purpose Internet Mail Extension (MIME) header it opens to make the attachment. The sweeping utility detects the open MIME header and traps it as a security measure.

For more information about this issue and for product updates to resolve it, go to <http://support.businessobjects.com/search> and search for article ID c2012808.

NOTE

If you are unfamiliar with MIME headings, go to www.whatis.com and search for "MIME" to get more information.

Talk to the mail administrator to find out if a mail sweeping utility is installed on the SMTP server.

Limitations

This section outlines some limitations to be aware of when using CE with SMTP.

Only use fully qualified email addresses

When using CE to send emails, you must use a fully qualified email address. You cannot use Microsoft Exchange address book names.

For example:

Instead of using **Joe Smith**, you must use **joe.smith@companyname.com**

Email Notification

Seagate Info (SI) had the ability to send email notification on the success or failure of scheduled reports. CE does not have any email notification built into it, although a custom application could be built to do this. For more information, refer to the Web Developer's Guide that is located on the CE Launchpad.

The Process – Server to Server

The process for scheduling to an email destination is the same as scheduling to the default destination with one additional step. You must specify whether to send an email to the SMTP server with the report link or with the report as an attachment.

The Crystal Job Server handles the report processing. It gets the report template from the Input File Repository Server, queries the database for the necessary data, formats the report, and performs any calculations that are needed. During this time, the status of the report is **Running**. The Crystal Job Server then sends the report to the SMTP server.

After the email has been successfully sent to the SMTP server, the status of the report instance is changed to **Success**.

IMPORTANT	CE does not check to verify that the SMTP server actually sends the email to the recipient(s). Once CE sends the email to the SMTP server, the instance is set to Success .
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Configuration

Before email can be sent to an SMTP server, CE must be configured to communicate with the SMTP server. Ensure that a valid account is set up on the SMTP server for CE before you configure CE to use SMTP. To verify that a valid email account has been configured and can be used in CE, refer to the [Troubleshooting](#) section of this whitepaper.

To configure CE to use an SMTP server, complete the following steps:

1. From the Crystal Launchpad, click the **Crystal Management Console (CMC)**.
2. Log on to the CMC using an Administrator account.
3. Click **Manage Servers**.
4. Click **servername.report** (servername refers to the name of the computer on which the Crystal Job Server resides). If multiple job servers are listed, this procedure must be followed for all the job servers that will be using SMTP.
5. Click the **Destinations** tab, select **CrystalEnterprise.SMTP**, and then click **Enable**.
6. Click **OK** and then click **CrystalEnterprise.SMTP**.
7. Configuration information about the SMTP server being used must be entered here. CE does not ensure that this information is correct so it is important that you type it in correctly

The following values must be entered:

Domain Name: Type in the name of the Domain that the SMTP server resides in.

Server Name: Type in the name of the SMTP server.

Port: The default port for SMTP communication is 25. If your SMTP server communicates on a different port, specify that port number here.

Authentication: Specify the type of authentication your SMTP server uses. Types of authentication include **none**, **plain**, and **login**.

SMTP User Name: Type the name of the account configured to use with CE.

SMTP Password: Type the password associated with the account set up for CE.

The following four fields are global default settings. Whenever a report is scheduled to an SMTP destination, these default values will be used. You can modify these settings for each report at schedule time.

From: Enter the email address that the reports will be sent from. When a user receives an email from CE, this is whom it will appear to be from. Any address can be used in this field, though it must conform to email address standards. For example, **a@b.c**

To: Enter the email address (es) of the recipient(s) that the email will be sent to by default. Multiple recipients must be separated with a semicolon. The address (es) entered in this field must conform to email address standards.

Subject: This is the subject of the email. This field will give recipients a description of the email they receive. It can be left blank.

Message: This is where the body of the email is entered. This field can be left blank.

Add viewer hyperlink to message body: This option will add the variable (%SI_VIEWER_URL%) to the body of the email. This variable contains a link to the report instance in the output file repository server. This option may be more efficient for larger reports. Click the **Add** button to add a variable to the email message that will contain the link.

To change the value of %SI_VIEWER_URL%, follow these steps:

1. Log on to the CMC.
2. Click the **Manage Objects** button.
3. In the upper right hand corner, click the **Processing Settings** button.
4. Type in the URL you wish to be displayed. By default the value of the URL is http://machinename/crystal/enterprise9/viewer/viewer.csp?id=%SI_ID% where **machinename** is the name of the APS.

NOTE	<p>In an environment where the web server is not on the same computer as the APS, the default URL does not work. In this case, you must replace the APS name with the web server name.</p> <p>The installation of CE may not correctly set the system's default viewer URL. In these cases, it will be necessary to manually enter the URL in the CMC.</p>
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Attach report instance to email message: This option adds the report instance as an attachment to the email message. The entire report will be sent to the recipient(s) email client.

File Name: File Name gives the option to specify a file name for the attached report file. The default filename can be used, which is a randomly generated set of characters, or a new filename can be specified. Variables can be added to the file name using the **Add a placeholder for a variable property** list. The report variables that can be added are report title, report ID, report owner, date/time the report was created, and the file extension. To add a variable to the title, select the variable from the list and click **Add**.

NOTE	These settings will not be stored in the APS database. They will be stored in a registry entry called PropertyBag located in the registry key: HKEY_Local_Machine\Software\Crystal Decisions\<version number>\Job Server\Instances\<machinename>.report\Destinations\CrystalEnterprise.SMTP
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Alert Notification

Alerts and Alert Notification are new to CE 9 and Crystal Reports (CR) 9. In CR 9 a report can include an alert that is triggered if a certain condition is met. CE 9 has the ability to send these alerts out through SMTP to the specified recipient(s). The email can contain a link to the report instance with a select statement showing only the data that meets the alert criteria.

To configure Alert Notification, complete the following steps:

NOTE	In order to use Alert Notification, you must first configure an SMTP destination for a Crystal Job Server. See the Configuration section in this whitepaper for step-by-step instructions to configure an SMTP destination.
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1. From the CMC, navigate to the report that contains the alert.
2. Click the report and then click the **Alert Notification** tab.
3. Select **Enable alert notification** . If you would like to use the Job Server's default values, go to step 5.
4. Click the **Set the values to be used at schedule time here** option and type values in the **From**, **To**, **Cc** and **Subject** fields.
5. Type something into the **Message** field if you want.
6. For each alert, type the URL to the report viewer in the Viewer URL field. You can also use the Default URL (%SI_VIEWER_URL%) by clicking **Use Default**.
7. For each alert, set the number of records that meet the alert criteria to be displayed in the body of the email in the **Maximum Alert Records** field.
8. Click **Update**.

Now when the alert is triggered, CE will send an email to the specified recipient(s).

Scheduling to SMTP

Once the job server is configured to use SMTP, reports can be scheduled to an SMTP destination.

ePortfolio

To schedule reports to SMTP in ePortfolio, complete the following steps:

1. Navigate to the report you would like to schedule to SMTP.
2. Click the report and then click **Schedule**. This opens the **Schedule** window.

3. In the **Customize your options** list, click **Destination**.
4. In the **Destination** list, click **Email (SMTP)**. You can use the job server's default values or new values for this specific report. If you want to use the job server's default values, go to step 6. If you want to modify the values for this report go to step 5.
5. Select the **Set the values to be used at schedule time here** option. You can now type information in the **From, To, Cc, Subject, and Message** fields. You can also choose to use a randomly generated file name (Default File Name) or to specify a file name for the attached report instance. Placeholders for variable properties can also be added to the file name (Title, ID, Owner, DateTime, and File Extension).
6. Click **Update** to save the report destination properties.
7. Click **Schedule** to schedule the report.

Crystal Management Console

To schedule reports to SMTP in the CMC, complete the following steps:

1. Navigate to the report you would like to schedule to SMTP.
2. Click the report, and then click the **Destination** tab.
3. In the **Destination** list, click **Email (SMTP)**. From here you can either use the job server's default values or specify new values for this specific report. If you want to use the job server's default values, go to step 5. If you want to modify the values for this report go to step 4.
4. Select the **Set the values to be used at schedule time here** option. You can now type information in the **From, To, Cc, Subject, and Message** fields. You can also choose to use a randomly generated file name (Default File Name) or to specify a file name for the attached report instance. Placeholders for variable properties can also be added to the file name (Title, ID, Owner, DateTime, and File Extension).
5. Click **Update** to save the report destination properties.
6. Click the **History** tab and then click **Run Now**.

Troubleshooting

General Tips

If you encounter issues when scheduling a report to a destination of SMTP, try these general troubleshooting steps to resolve them.

Has CE been properly configured to use an appropriate SMTP server?

You can double check this by referring to the Configuration section of this document.

Can the CE server ping the SMTP server?

To test that network communication is functioning and that CE can communicate with the SMTP server, a ping test should be performed. To perform a ping test, complete the following steps:

1. From the CE server, go to **Start > Run**.
2. Type “cmd” (without the quotations) and then press the **Enter** key. The Command Prompt window opens.
3. Type “ping mailserver” (where **mailserver** is the name of the SMTP server) and press the **Enter** key.

You should receive a reply similar to the following:

```
Reply from 192.168.3.1: bytes=32 time<10ms TTL=128
```

The “Reply” indicates that network communication is possible.

If you do not receive a reply, communication between the CE server and the SMTP is not possible. Consult your network administrator to determine the cause for this.

Is this behavior only happening in CE?

When the Crystal Job Server sends email to an SMTP Server, it is acting as an SMTP client. To troubleshoot issues between CE and an SMTP server, it is helpful to use a third-party SMTP client such as Netscape Mail or Microsoft Outlook Express on the computer hosting the Crystal Job Server. If email cannot be successfully sent from the third-party SMTP client, all SMTP communication from the Crystal Job Server will fail.

NOTE	Although CE is not dependant on a third-party SMTP client, a third-party SMTP client is useful when troubleshooting failed instances to an email destination.
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To test using a third-party SMTP client, complete the following steps:

1. Log onto the CE server using the same account that the Crystal Job Server uses.
2. Open the email client and, if necessary, configure the client to use the same SMTP logon credentials as the Crystal Job Server. To determine what SMTP settings the Crystal Job Server uses, refer to the Configuration section of this whitepaper.
3. Copy the settings in this configuration window to the email client configuration.
4. Create an email with a file attachment that is the same size or larger than the report instance and send the email to yourself to confirm that it is sent successfully.

If any “Undeliverable” messages are returned to the SMTP client (you may have to manually request the mail from the server), the SMTP server may not be properly configured. Speak to your mail administrator to resolve this issue.

NOTE

Confirming that the email has been sent by checking the **Sent Items** folder on the SMTP server is not a recommended method of troubleshooting.

Report gives a “Failed” status after scheduled to a destination of SMTP

If a report fails to schedule, its status displays **Failed** rather than **Success**. If this occurs, the first thing to do is verify that the report can schedule to the default destination rather than SMTP. If the report fails to schedule to the default destination, then the report is failing at the processing stage.

To get more information on why the report failed, click the **Failed** status to see what error message the job server captured. Below is a list of standard SMTP error messages and a description of each:

"login error. CrystalEnterprise.Smtp: SMTP_E_AUTH_REQUIRED(530)"

If you receive this error, check the **Authentication** type in the **CrystalEnterprise.Smtp** properties for the Crystal Job Server. Ensure that it is compatible with SMTP server settings. You may have to speak to your mail administrator to determine this.

"server error: CrystalEnterprise.Smtp: SMTP_E_TCPSOCKET_OPEN(2)"

This error can occur for several reasons. These reasons and solutions are listed below.

- This error occurs if **Crystal Enterprise.Smtp** is unable to locate the SMTP server on the configured port. The SMTP server is probably using a different port than the one CE is searching on. Ensure that these port numbers match.

- On a Solaris system, this error occurs because the job server default settings do not take effect until the report has been scheduled once with non - default parameters.

When a Solaris deployment is first configured for SMTP email, the default settings in the CMC will not be accepted until one report is scheduled using non-default settings. Once this is done, scheduling works as expected with the default settings.

To do this, complete the following steps:

1. In the CMC, configure the job server's SMTP setting to output to the SMTP server.
2. Click **Manage Objects** from the CMC home page, click a report, and then click the **Destination** tab.
3. Click **Email (SMTP)** from the **Destination** list box.. Below this list box are the options **Use the Crystal Job Server's defaults** and **Set values to be used at the schedule time**.
4. Click the **Set values to be used at the schedule time here** option and type valid email addresses in the **To** and **From** fields.
5. Click the **Update** button and then click the **Schedule** tab.
6. Schedule the report to process once now.

The next time a report is scheduled to email, the report will process successfully using the job server defaults.

- The third reason this error message may occur is if an IP address is used for the SMTP server name. Hot Fix updates addressing this issue are available as indicated below. With the updates applied, you can successfully provide an IP address as the name of the SMTP server.

"login error. CrystalEnterprise.Smtp: SMTP_E_TCPSOCKET_RECV(4)"

- This error occurs because the SMTP password specified in the **CrystalEnterprise.Smtp** properties for the Crystal Job Server is incorrect.

"address error: CrystalEnterprise.Smtp: SMTP_E_MAILBOX_UNAVAILABLE_2(550)"

- This error occurs if the SMTP user name specified in the **CrystalEnterprise.Smtp** properties for the Crystal Job Server does not exist on the SMTP server.
- This error message can also occur if the incorrect addressing format is used. CE does not recognize Lotus Domino group names or Exchange address book names. Only fully qualified email addresses are recognized. If your email address has spaces in it, you must use double quotes around the address for CE to recognize it. For example:

"lotus group@domain.com"

For more information on SMTP error messages, search for **RFC 821** on the Internet.

Err Msg: "address error.CrystalEnterprise.Smtp: (454)"

- This error occurs if the SMTP user name and password specified in the **CrystalEnterprise.Smtp** properties for the Crystal Job Server are incorrect.

To resolve this error message, complete the following steps:

1. In the CMC, click **Manager Servers** and then click **servername.report** (Crystal Job Server).
2. Click the **Destinations** tab and then click **CrystalEnterprise.Smtp**.
3. Re-enter the user name and password which is used to log on to the smtp server.
4. Click the **Update** button.

Now reports can be successfully scheduled to email.

For more information refer to the Configuration section of this document.

Err Msg: "write error. CrystalEnterprise.SMTP: (0)"

- This error occurs if the SMTP server has a file size limit set on messages or attachments.

To resolve this error, do one of the following:

- Increase the size limit on the SMTP server.
- Create smaller report files.
- Send a link to the report rather than sending it as an attachment.

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