



Configuring Email Feature in OCS

Requirements:

1. OCS with firmware version 12.6 and beyond (OCS with inbuilt ethernet support like NX, XL6e, QX series).
2. Cscape version 9 and beyond.
3. Configured Ethernet module (Proper IP address, Net Mask and Gateway address)
4. Email server details (SMTP server IP, port, etc)

Email Configuration (refer Email Configuration in Cscape help for more details)

1. Open Cscape.
2. Configure the ethernet port (if already configured goto next step) by **Select Controller| Hardware Configuration| Ethernet(300)Config| Module Setup** and configure the IP address, Net mask and Gateway for the OCS correctly (refer SUP0740 for details on configuring ethernet module).
3. To open the **Email Configuration** dialog, Click on Program and then select **Messaging|Email**.
4. Enable **Email Configuration** to begin feature configuration.
5. Configure the **Email Status Register** (details of status word provided towards the end of this document).
6. Click on **E-Mail Server Configuration**.

If the user wants to provide the email configuration through registers, '**Get Settings from Register**' checkbox should be checked. In this case the entire configuration data is taken from logic registers. Following considerations must be made when using registers for configuration.

- DNS Server IP and SMTP Server IP needs to be provided in 32-bit IP format in the defined register location.
- Port number needs to be provided in 16-bit numeric format at the defined register location.
- Email address needs to be provided at the register mentioned followed by null termination or space.
- SMTP Server Name (if required) needs to be provided at the register mentioned followed by null termination or space.
- User Name and Password (if required) needs to be provided at the register location mentioned followed by null termination or space.

Or configure the SMTP server details directly.

7. The **Email address** of the controller can be configured here. If the user wants to provide email address through register, the **Get Settings from Register** checkbox can be clicked and register reference can be provided in **E-mail Address** edit-box. The register mentioned here should contain the email address followed by null termination or space.
8. The **SMTP Server** IP address of the email service provider needs to be provided here. In case SMTP server IP needs to be obtained from DNS server, select **Obtain SMTP Server IP Address**

- from **DNS Server** checkbox. This will enable **DNS Server IP** and **SMTP Server Name** edit-boxes. Configure these with the information provided by email service provider.
9. The default **Port** for email configuration is set to 25 but can be changed by user if required.
 10. E-Mail feature also supports Login type of SMTP authentication. To use this, the **SMTP Authentication** checkbox should be checked. The username and password for authentication needs to be provided here.
 11. Click OK to accept settings and return to Email-Configuration dialog.
 12. Next step is to configure **Email Directory**.
 - Click **Add Contact** in **Email Target Directory** to add a contact.
 - Click **Modify Contact** if a contact is already added in the directory. (You will see information about the contacts) To modify the contact, either double-click the row or highlight the row and click **Modify Contact**. The **Modify Contact Information** screen appears, where the contact can be modified.
 - Click **Delete Contact** to remove a listing after highlighting the row.
 13. **Group Name** is used to send common email to a group of email addresses. Following are the guidelines for naming groups.
 - It can contain characters A-Z, a-z, 0-9, and the **_** underscore character.
 - The first character must be A-Z, a-z, or the **_** underscore character.
 - Do not use spaces or special characters.
 - Do not use two consecutive underscore characters.
 14. Either enter an **Email Address** *or* enter a register where the email ID is stored. The email address can be provided through register if it is required to be changed during runtime. The register mentioned here should contain the email address followed by null termination or space.
 15. If the Email Address is provided through register, the IO name can be provided in the **Mail ID Name**.
 16. Add description/comments for the email address in the **Comments**.
 17. After creating email directory, next step is to create messages to be sent by OCS by clicking **Outgoing Messages**. Note that email directory should be configured before outgoing messages can be configured.
 - Click **Add New Message** to add a new Email message format.(i.e. Email body).
 - Click **Modify Message** to edit a message that is already in the list. Either double-click the row or highlight the row and click **Modify Message**.
 - Click **Delete Message** to remove a message after highlighting the row.
 18. An event is needed to **Trigger** an Email communication from the controller to the member(s) of a Group. Enter a bit reference in the **Address** field that (when set to HIGH) causes the Email message associated with the trigger to be sent to the specified Group member(s). An I/O name can be entered or selected in the **Name** field. This bit is reset by firmware after sending email associated with it.
 19. Enter or select the **Send Group** that this Email message is to be sent to.
 20. Enter the **Subject** of the Email message and body of the message in the dialog below it.
 21. Message can contain **register data values**, which approved group members can read from the controller's data registers at runtime. In order to edit/add register data values, click **F2 = Insert Field** button and configure the **Insert Value Field**.

22. In the dialog select a logic register and set its format (type, number of digits, etc.)
23. Email body can also have special characters that can be added by clicking **F3 = Insert Char.**
24. Click **OK** to add registers/characters in the email body.
25. Click **OK** to accept Email configuration.

Email Status is a 32bit register.

Bit No	Error	Reason	Remedy
1	Invalid Configuration Error	User downloaded Cscape configuration is invalid.	Check and re-download Email configuration.
2	Invalid IP or Port address	Configured Email Server IP or Port address is incorrect.	Verify configured Email server IP Port address.
3	Socket Error	Internal TCP Resource Error.	Reduce number of TCP connection in use by device and retry.
4	Bind Error	Internal TCP Resource Error.	Reduce number of TCP connection in use by device and retry.
5	Connection Timeout Error	Device is not able to connect specified Email server within 30sec of timeout value.	Check configured Email server name (or IP address) and Port address.
6	Transmit Buffer Error.	Internal Memory resource Error.	Reset the device and retry.
7	Transmit Error.	Internal resource or connection break can cause this error.	Check configured Email server name (or IP address) and Port address.
8	UDP Resource Error	Internal Resource Error.	Reduce number of UDP connection in use by device and retry.
9	DNS Error Response.	Erroneous response received from DNS server.	Check configured DNS server IP address and Email Server Name.
10	DNS Response Timeout	No response received from DNS server.	Check configured DNS server IP address.
11	SMTP Command Timeout	No response received from Email server for Email command sent.	Check configured Email server name (or IP address), Port address, Email address (To and From), Username and Password.
12	SMTP Error Response	Error response received from Email Server for Email command sent.	Check configured Email server name (or IP address), Port address, Email address (To and From), Username and Password.

Bit No	Error	Reason	Remedy
13 to 16	SMTP Error State code.	This field provides SMTP State (or command) code where Error occurred.	1= DNS query State. 2= DNS Response State. 3= Establish Connection State. 4= SMTP HELO Command State. 5= SMTP Authentication State. 6= SMTP Username State. 7= SMTP Password State. 8= SMTP From Mail Address State. 9= SMTP Receiver Mail Address State 10=SMTP Data Command State. 11=SMTP Send Data State. 12=SMTP End Data State. 13=SMTP Quit State. 14=Waiting for Response.
17 to 32	SMTP Server Error Response code.	This field provides SMTP Error response code received from SMTP server.	Details of different error codes can be found in RFC 821 and RFC 2554 documents. Eg: '500' Syntax error, command unrecognized.

Note: In Email feature transmit trigger bit should get reset within 30sec of time or Error status should get updated indicating error information. If there is no status it means either Device is not in RUN mode or Email feature is not configured or invalid Email configuration is downloaded.