How to send an email with one attached file by iP-8447/8847 or uPAC-7186EG?

Download FAQ-067 Demo.

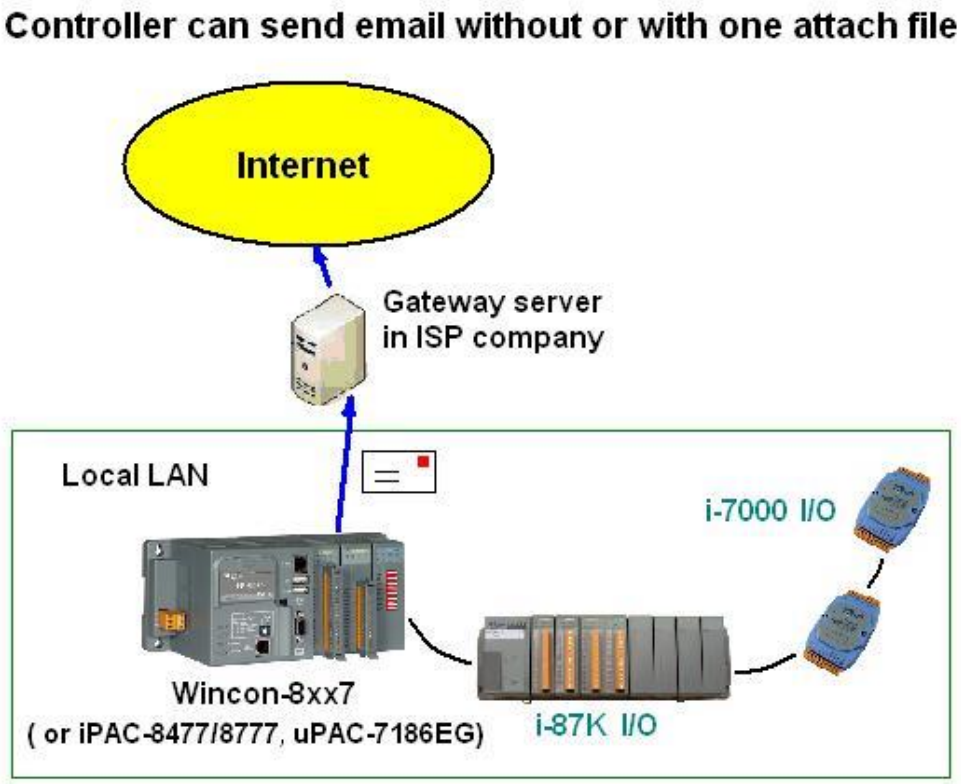
Note:

WinCon-8xx7 and iPAC-8x**7**7 have been phased out. Also, XP-8x37-CE6, iP-8x**4**7, or uPAC-7186EG is available to send email via its Ethernet port. These PACs must reside at a local network which can connect to the Internet, or sending email is not possible.

Visit the ISaGRAF wesite for more information about products.
http://www.icpdas.com/en/product/guide+Software+Development__Tools+ISaGRAF

ISaGRAF Driver:
https://www.icpdas.com/en/download/show.php?num=368&nation=US&kind1=&model=&kw=ISaGRAF

ISaGRAF Demo:
https://www.icpdas.com/en/download/show.php?num=1005&nation=US&kind1=&model=&kw=ISaGRAF (Demo for ISaGRAF XPAC : xpdmo_62.pia, xpdmo_63.pia, xpdmo_65a.pia, xpdmo_66.pia)



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Features:

1. The sending Email can contain one attached file or without any attached file. The attached file format can be text or binary or any file format. The approximate max. file size is listed as the following.

Wincon-8xx7:	2M Bytes.
iPAC-8447 / 8877:	488K Bytes
uPAC-7186EG + X607:	112K Bytes
uPAC-7186EG + X608-RoHs:	488K Bytes

2. Email Title can be max. 128 bytes. Email content can be max. 510 bytes. Local language word can be used (English, Chinese, any language character which computer can use).

3. One email can send to 10 receivers at one sending.

4. Each email can be assigned as High, Low or Normal priority.

5. Please assign at least one Mail Server IP in the ISaGRAF program. **Or for safety, assign two Mail servers IP. Then if one Mail Server is out of service, the PAC will send this email by the other Mail server**.

6. If PAC model is XP-8xx7-CE6 或 iP-8xx7 (dual LAN) and both LAN ports are enabled, PAC will automatically switch to the other Ethernet port to send email if one is broken or damaged.

7. If the sending email has one file attached, this file must be stored or copied to the correct file path before it is sent.

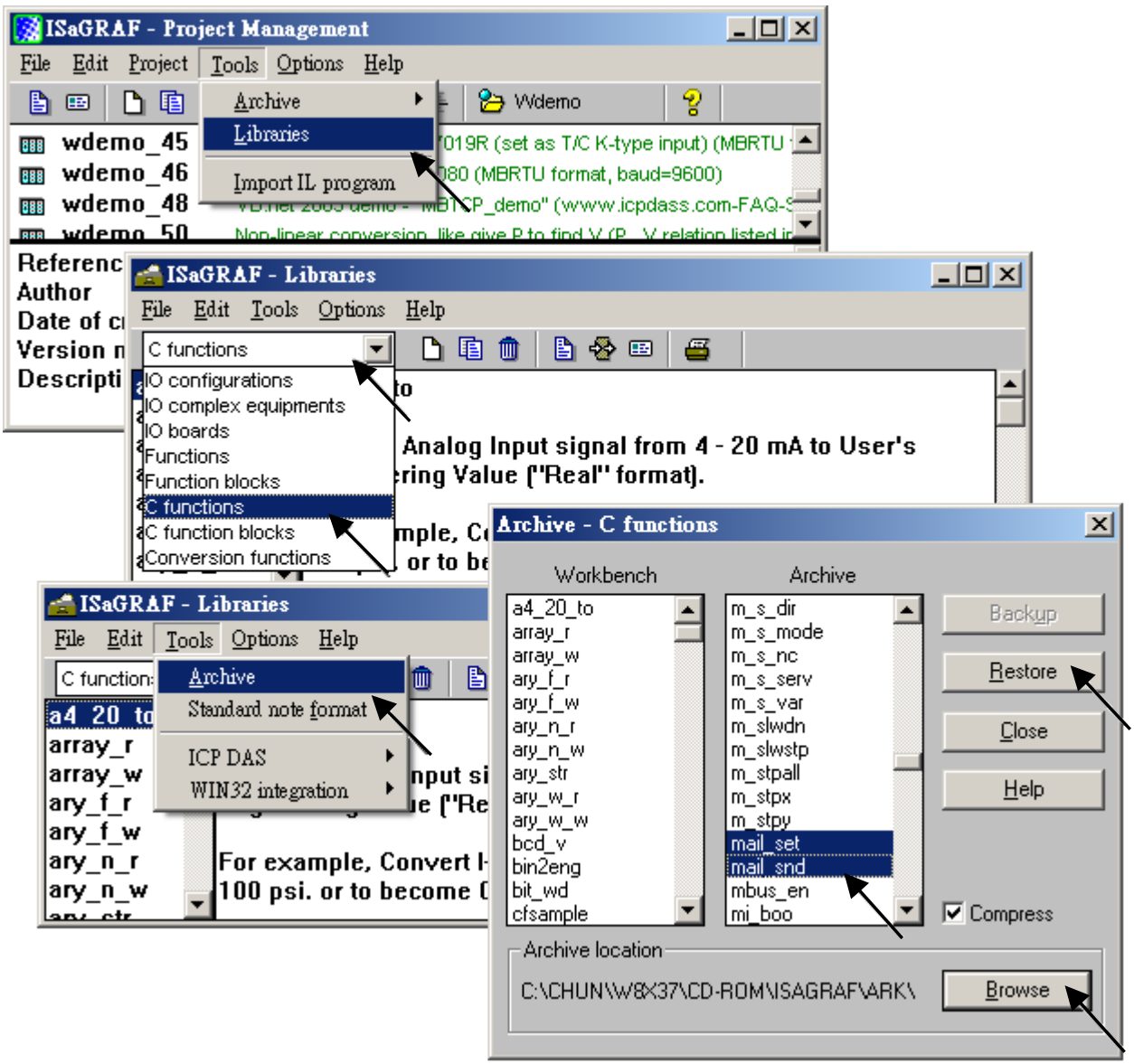
   ISaGRAF WinCE PAC:
   File should be stored in the path of '\Email_ETH\', for example, the '\Email_ETH\A1.txt'

   iP-8447/8847 & uPAC-7186EG:
   File should be stored in the battery backup memory by the "S_xxx" functions, like the "s_fl_ini", "s_fl_avl", "s_m_r", etc. please refer to section 10.3 and ISaGRAF Appendix A.4.

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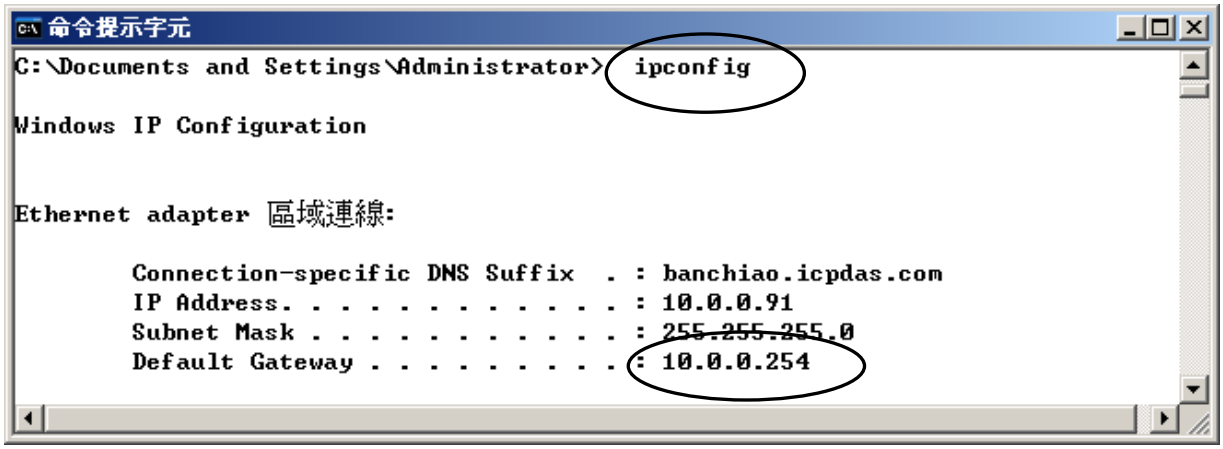
Please make sure if your ISaGRAF software on PC has been installed the ISaGRAF c-function of “Mail_snd”, “Mail_set” and “R_mb_adr”. If not installed, please visit to the ISaGRAF FAQ webpage http://www.icpdas.com/en/faq/index.php?kind=280#751 FAQ-067 to download the Demo program.

Then restore “Mail_snd.uia”, “Mail_set.uia” and “R_mb_adr.uia” to your ISaGRAF on PC by below steps.



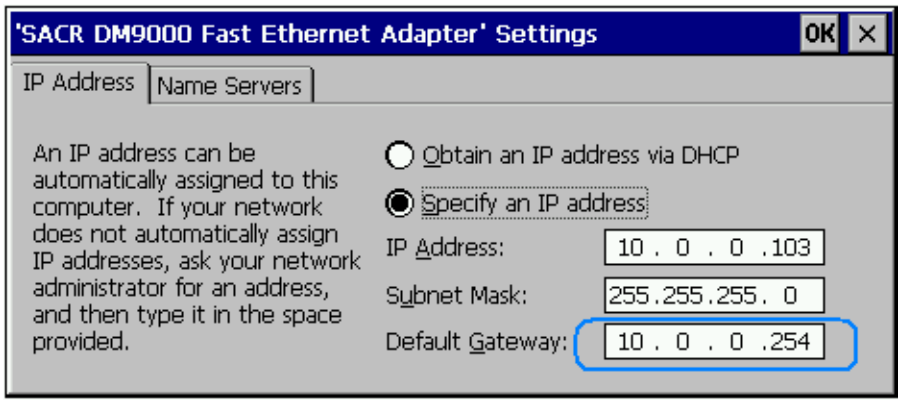
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To send email correctly, please set proper Gateway IP in the PAC's Ethernet port setting. Please type command "**ipconfig**" in a PC's command prompt window at the same local network to get the Gateway IP setting as below. (Here is 10.0.0.254)



Then enter this Gateway IP address to your PAC's Ethernet port setting. (When using dual-Ethernet PAC, two Ethernet ports can be enabled, then you need to fill-in both with the same Gateway IP)

ISaGRAF WinCE PAC:



Then run PAC Utility – Save and Reboot to store the IP setting. It will automatically re-boot once.

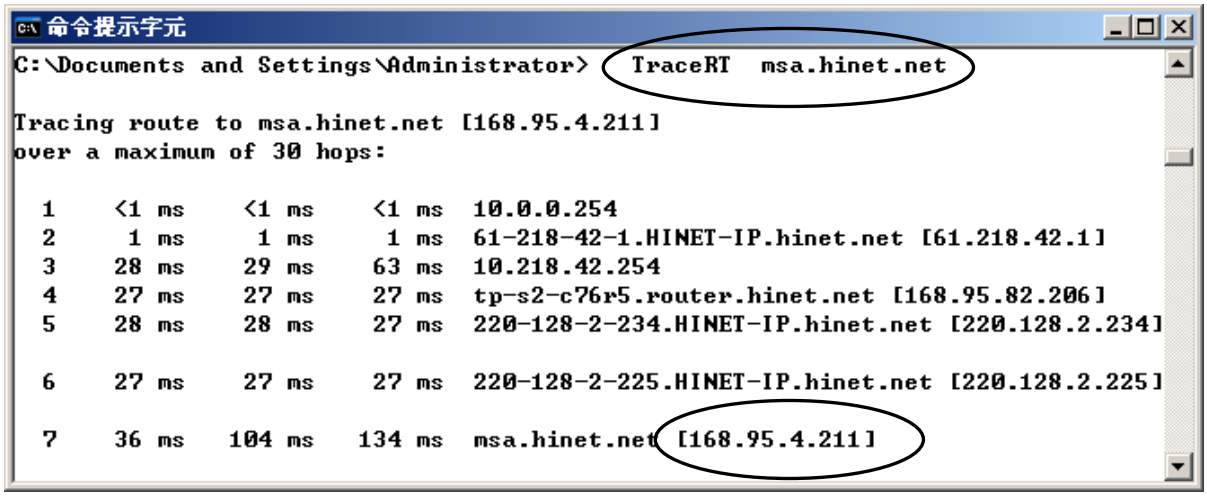


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iP-8447/8847 & uPAC-7186EG **:**

Please run "7188xw.exe" in the PC and give command (e.g.,, "gateway 10.0.0.254") if the gateway IP is 10.0.0.254. (Please refer to ISaGRAF Appendix B)

The PC's command prompt windows can also request the Mail server's IP address (We need it in the ISaGRAF program). For example, to request IP of msa.hinet.net, please type command as below
TraceRT msa.hinet.net (Here is 168.95.4.211)



Email demo download from FAQ – 067 has three example programs.

"Wdemo_62.pia" is the demo without attached file.

"Wdemo_63.pia" is the demo for WinCon-8xx7 with one attached file .

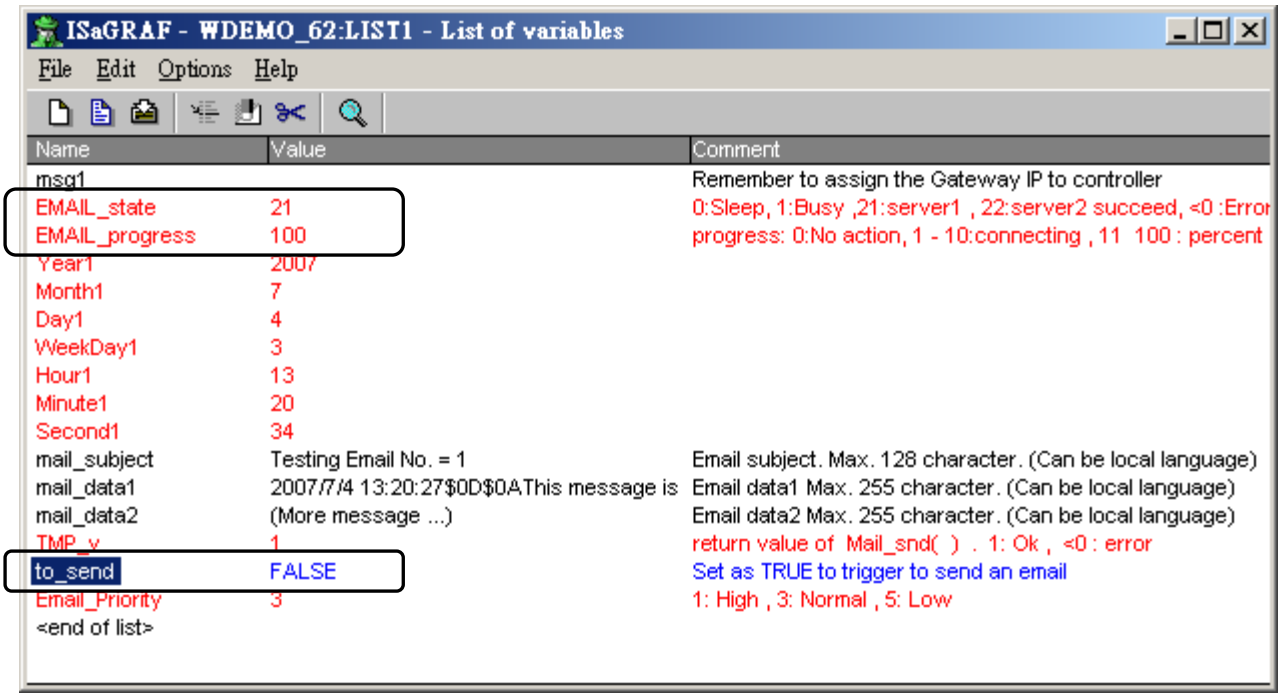
"Wdmo_63a.pia" is the demo for uPAC-7186EG and iP-8447/8847 with one attached file .

Please modify at least the below setting in the demo program to your own setting .

```
TMP := MAIL_SET( 1, 'chun@icpdas.com' ) ;          (* Receiver 1. please modify it *)
TMP := MAIL_SET( 100, 'go_mao@hotmail.com' ) ;     (* Sender. please modify it *)
TMP := MAIL_SET( 101, '168.95.4.211' ) ;           (* Mail Server 1's IP, please modify it *)
```


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Then re-compile it and then download it to the PAC to run. The below windows will show up. Please set "**to_send**" as TRUE to trigger to send one email. Few seconds later, value of "**Email_state**" will be 21 or 22 if succeed. However value of "Email_state" will be less than 0 if failed. When "**Email_progress**" reach value of 100, it means the email data is 100% sent.



Below is the description of the three ISaGRAF functions for sending email.

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MAIL_Set (CMD_, MSG_)

Parameters:

CMD_ Integer Can be the following value.

1 : Set receiver 1, for ex, TMP := Mail_set(1, 'chun_tsai@icpdas.com') ;
Max. receiver length can not exceeds 48 characters.

2 to 10 : Set receiver 2 to 10 if they exist.

100 : Set the sender, e.g., TMP := Mail_set(100, 'sender1@icpdas.com') ;
Max. sender length can not exceeds 48 characters.

101 : Set the Mail Server 1's IP address, e.g., TMP := Mail_set(101, '168.95.4.211') ;

102 : Set the Mail Server 2's IP address if it exist.

103 : A new TCP port No. for sending email. (Default is 25 “SMTP protocol”)

MSG_ Message the related message setting according to the 1st parameter - CMD_

Return:

Q_ Boolean True : Ok . False : the related setting is not correct or the "CMD_" value is not correct.

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MAIL_snd (Start_, Num_, Subject_, Prio_, Data1_, Data2_, Attach_)

Parameters:

Start_	Integer	Starting receiver No. Can be 1 through 10.
Num_	Integer	Number of receivers. Can be 1 through 10.
Subject_	Message	Subject of the email. Max. length is 128 characters. E.g., 'Alarm of plant 1'.
Prio_	Integer	Set Email Priority symbol. Value can be 1: High, 3: Normal, 5: Low (The default setting is 3).
Data1_	Message	The email data 1 (Max. 255 characters). E.g., 'Pressure 1 is too high. Please check it soon ! ... '
Data2_	Message	The email data 2 (Max. 255 characters). More message behind the "Data1_". E.g., 'More message ...'
Attach_	Message	The attached file name if it exists. Max. 64 charcters. Please give '' (empty messge) if no attached file used.

WinCE-based PAC: File must store in the '\Email_ETH\' folder. E.g., '\Email_ETH\A1.txt'

uPAC-7186EG: File must store in the X-607, X-608 memory .

iPAC-8447/8847: File must store in the built-in battery SRAM in the backplane.

The value ‘1’, ‘2’, …, ‘8’ can be used for uPAC-7186EG and iP-8447/8847. The number is the file ID No. set by the “S_FL_AVL” function. (Refer to section 10.3 or ISaGRAF Appendix A.4)

The max. attached file size are listed as following.

WinCon-8xx7:	2M Bytes	iPAC-8447/8877:	488K Bytes
uPAC-7186EG + X607:	112K Bytes	uPAC-7186EG + X608:	488K Bytes

Return:

Q_ Integer

1 : Ok, then start sending email ...

< 0 : error

-1 : Busy . The earier email is still sending ...

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-2 : The first Receiver (No. = "Start_") is empty or error.

-3 : Mail Server 1 is empty or error.

-4 : Sender is empty or error.

-5 : "Start_" value less than 1 or larger than 10

-6 : "Subject_" exceeds 128 characters.

-7 : Email system is not active yet, Please use "mail_set( )" to set at leaset one receiver email box address, one Mail Server IP and the sender email box address.

-8 : "Num_" value less than 1 or larger than 10.

-9 : The given attached file name doesn't exist or file path name > 64 characters or its size exceeds the allowed file size.

R_MB_ADR(1, 9995) is to get the email sending state sent by "Mail_snd( )".

The return value of R_MB_ADR(1, 9995) will remain until next calling “Mail_snd( )”

Return:

0 : Sleep. No action

1 : Busy. one email is still sending now

21 : Email is successfully sent through Mail Server 1

22 : Email is successfully sent through Mail Server 2

< 0 : Error happens

-1 : Can not connect to the Mail Server

-2 : Sender setting is rejected by the Mail Server

-3 : Time out

-4 : Ethernet socket error

-5 : Receiver setting is reject by the Mail Server

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R_MB_ADR(1, 9994) is to get the current email sending progress sent by "Mail_snd( )" .

Calling “R_MB_ADR(1, 9994)” can not get the Error No. when error happens. Please use “R_MB_ADR(1, 9995)” to get it.

If error happens while sending email, the return value will stay at its last value until next calling “Mail_snd( )”

Return:

0 : No action

1 : Connecting to Mail Server 1

2 : Mail Server 1 connected . Sending "HELO “

3 : Sending "MAIL FROM: ..." to Mail Server 1

4 : Sending "RCPT TO: ..." to Mail Server 1

5 : Sending "DATA" to Mail Server 1

6 : Connecting to Mail Server 2

7 : Mail Server 2 connected . Sending "HELO ..."

8 : Sending "MAIL FROM: ..." to Mail Server 2

9 : Sending "RCPT TO: ..." to Mail Server 2

10 : Sending "DATA" to Mail Server 2

11 ~ 100 : The current progress of sending email data.

For example,
25 means 25 / 100 = 25 %
36 means 36 / 100 = 36 %
95 means 95 / 100 = 95 %
100 means 100 / 100 = 100 % (sent completely)

Click the link for more ISaGRAF FAQ:
http://www.icpdas.com/en/faq/index.php?kind=280#751

Related FAQ: FAQ-071, 72, 77, and 80

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