

	CIRCABC – Conceptual Problem
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## 1 Non-technical Problem Description

E-mails sent by the CIRCABC server might never arrive at the recipient depending on the recipients mail server restrictions.. I.e. when an interest group leader adds an applicant, an e-mail is sent to the applicant. This e-mail may never arrive at the applicant because it may be filtered by anti spam software or even worse may be rejected by the mail server of the recipient.

## 2 Technical Problem Description

As the fight for spam evolves to such ideas as SPF (Sender Policy Framework see: [http://de.wikipedia.org/wiki/Sender\\_Policy\\_Framework](http://de.wikipedia.org/wiki/Sender_Policy_Framework)) and more and more SMTP-level restrictions, it is not a good idea to forge mail headers and send mails from mail-servers which are usually not responsible for this.

A proof of concept can simply be built with a smtp-server ([http://www.postfix.org/ADDRESS\\_VERIFICATION\\_README.html](http://www.postfix.org/ADDRESS_VERIFICATION_README.html)) and a spam filtering engine (i.e. open-source spam assassin which is a commonly used tool).

## 3 Related Versions

CIRCABC 2.0 is affected by this problem. Prior versions may also be affected by this problem.

## 4 Reason

If an e-mail is sent by a user invoked action, the from header in this e-mail will contain the users e-mail address. This e-mail is sent via the mail server of the CIRCABC system.

Many incoming mail servers check whether the sending mail server is registered in the MX record of the domain contained in the from address header. This serves as a spam protection measure.

Many users will have an e-mail address at a domain which is not served by the same mail server as the CIRCABC system. If this is the case, the MX entry of the domain in the from address header will be different from that of the sending mail server. (The mail server of the CIRCABC system.) Now the mail server of the recipient will detect a possible spam mail and may mark the e-mail as spam, or may even reject it.

## 5 Solution to the Problem

These are some suggestions how to solve the problem. None of these solutions have been tested yet. Source code modifications will not be tested until the release of CIRCABC 3.0.

### 5.1 Rewriting the e-mail header

In your outgoing mail server rewrite the e-mail header. Set the reply-to address header to the from address header. After this set the from address header to `noreply@<your_circabc_domain>`.

So the e-mail has a verifiable from address header from the correct mail server but the reply function in the mail client will also work.

### 5.2 Modifying the Source Code

Modify the source code of CIRCABC. The mail module should always use the

## 5.2 Modifying the Source Code

“noreply@<your\_circabc\_domain>” as the from address header. The users e-mail address should be stored in the reply-to address header.

### 5.2.1 Cheap Solution

In the class “eu.cec.digit.circabc.repo.mail.MailServiceImpl” modify the method “sendImpl” so that the method parameter “String from” will be used as the reply-to address header for the mail message and the from address header will be set to “getNoReplyEmailAddress()”.

### 5.2.2 Expensive Solution

Modify the class “eu.cec.digit.circabc.repo.mail.MailServiceImpl” and the interface “eu.cec.digit.circabc.service.mail.MailService” so that all “send” and “sendNode” methods take an additionally parameter “String replyto” which contains (surprise :-) the reply-to address. This parameter should have the possibility of being null if there is no reply address. Now you have to modify all classes and interfaces where these methods are called. (This will be a lot of work. And do not forget the testing.)

## 6 Questions

If you have any questions about this document, please contact CIRCA support at ni database solutions. Please refer to this document in the subject.

E-mail address: support@circa-support.eu

## 7 Disclaimer

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