

# ClearQuest EmailPlus - An Enhanced Email Notification Mechanism

Alan Murphy  
IT Specialist, IBM Rational Brand Services  
Alan.murphy@uk.ibm.com



IBM Rational Software Development Conference 2008

WHERE TEAMS ARE **R-HEROES**



## Agenda

- Limitations of Today's ClearQuests Email Sending Solution
- What Is EmailPlus
- EmailPlus Features
  - Configuration
  - Operating Modes
- How Do You Get EmailPlus?



## No Sending Context

- ✘ Emails Can Only Contain:
  - Data from one record
  - New or Old Field Values Only
  - Nothing from the Environment
  - Nothing from Other records
  - No Explanatory Text

```
Subject: ID:RSDC00000012
```

```
Headline: Problem with logon Screen
```

```
Priority: 2-Give Immediate Attention
```

```
Owner:Hawkeye
```

```
Submitter:Gatekeeper
```

```
SubmitDate:2008-09-10 11:23:00
```

```
Description:The user ID field isn't wide  
enough to contain largest permitted value
```



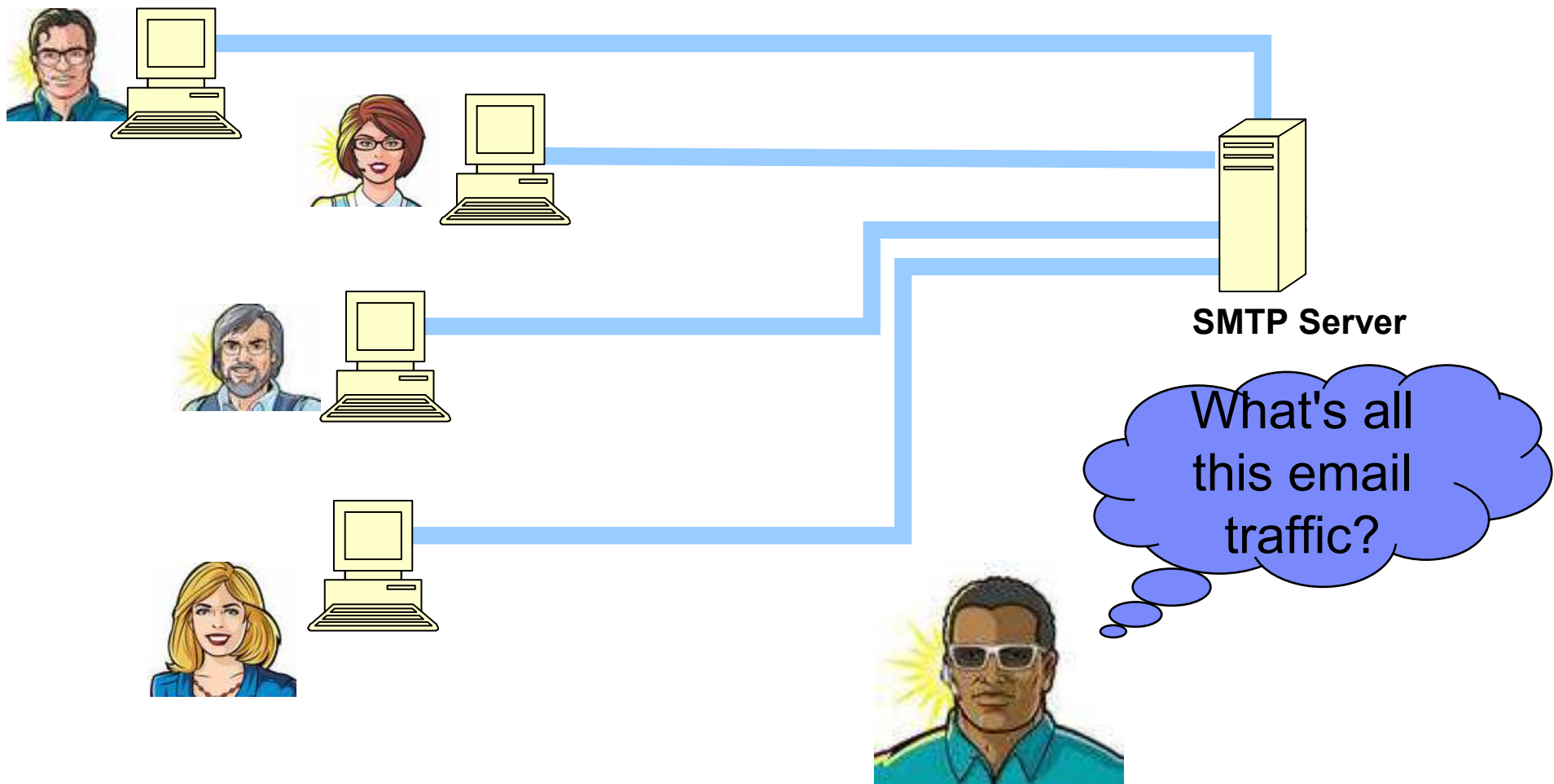
## No Rich Content

- ✘ No Emphasis In Content
  - Can't Use Text Effects Like Bold etc
  - Can't Use Colour
  - Can't Insert Graphics
  - Can't Add Attachments
  - Can't create a link to the record

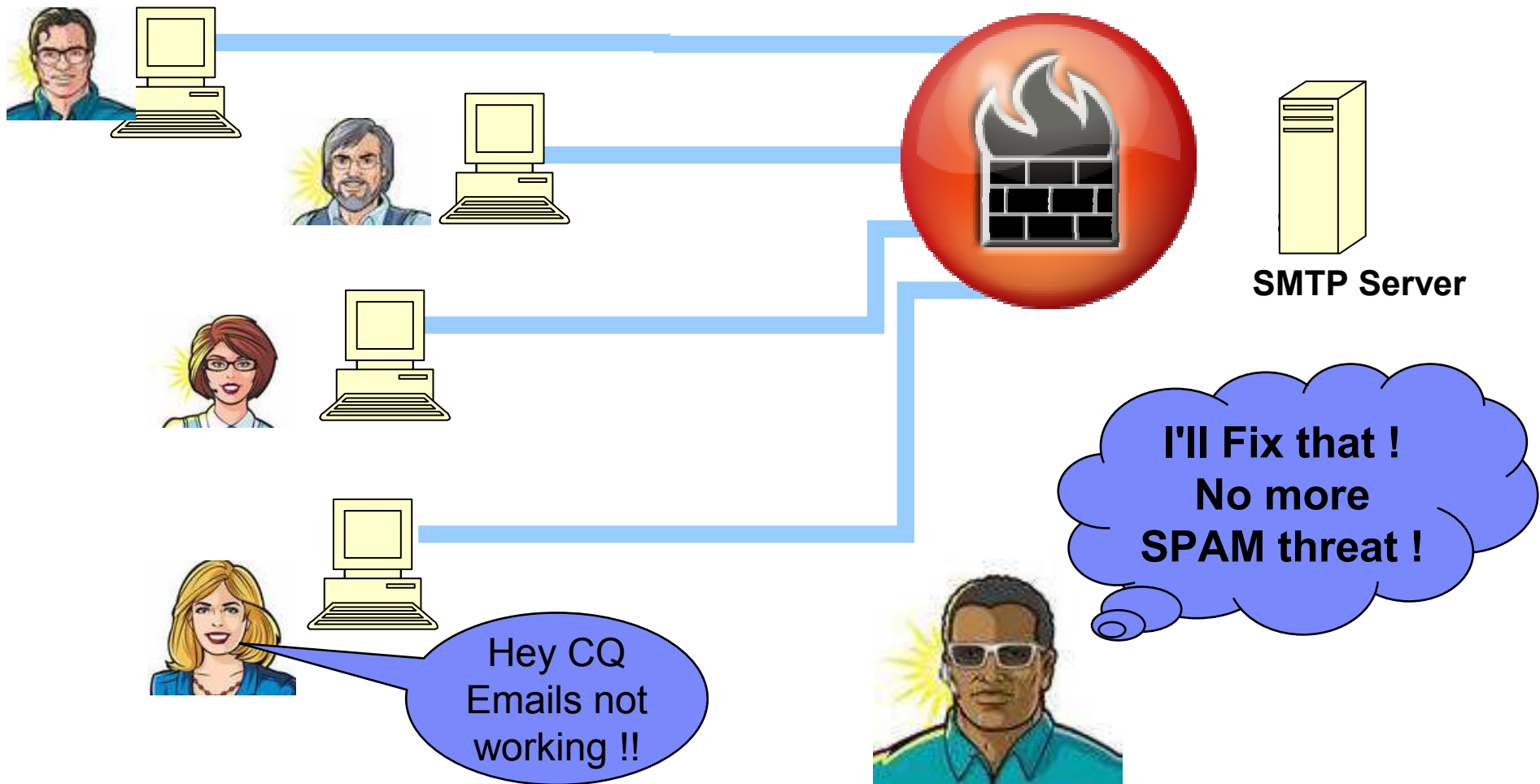
I expect **Rich Content** in my e-mails to highlight important information and improve readability



## CQ Clients Talk Direct to SMTP Server



# SMTP Server Lockdown





## Other Limitations

### ✘ Limited Rule Conditions Based On:

- State Transitions
- Actions
- Query on Data in Triggering Record Only
  - Performance Can be a Problem with lots of Rules

### ✘ Limited Addressing Capabilities

### ✘ Not End-User Customisable / Extensible

### ✘ MAPI now effectively useless due to security patches





## What is EmailPlus ?



- A New ClearQuest Email Package
  - Replacement For Out-of-the-Box Email Rules Package
  - **Written in VBScript**
    - **Any Custom Extensions are done in VBScript**
    - Works in Perl Schemas (**Windows Platforms Only**)
    - Certain Transport Modes Require a Free Third Party Component
  - Emails based on a template that can:
    - Provide Boiler Plate Text
    - Take Data from many sources – Not just the record
- ***Supplied as an add-on by the Rational Services Team***

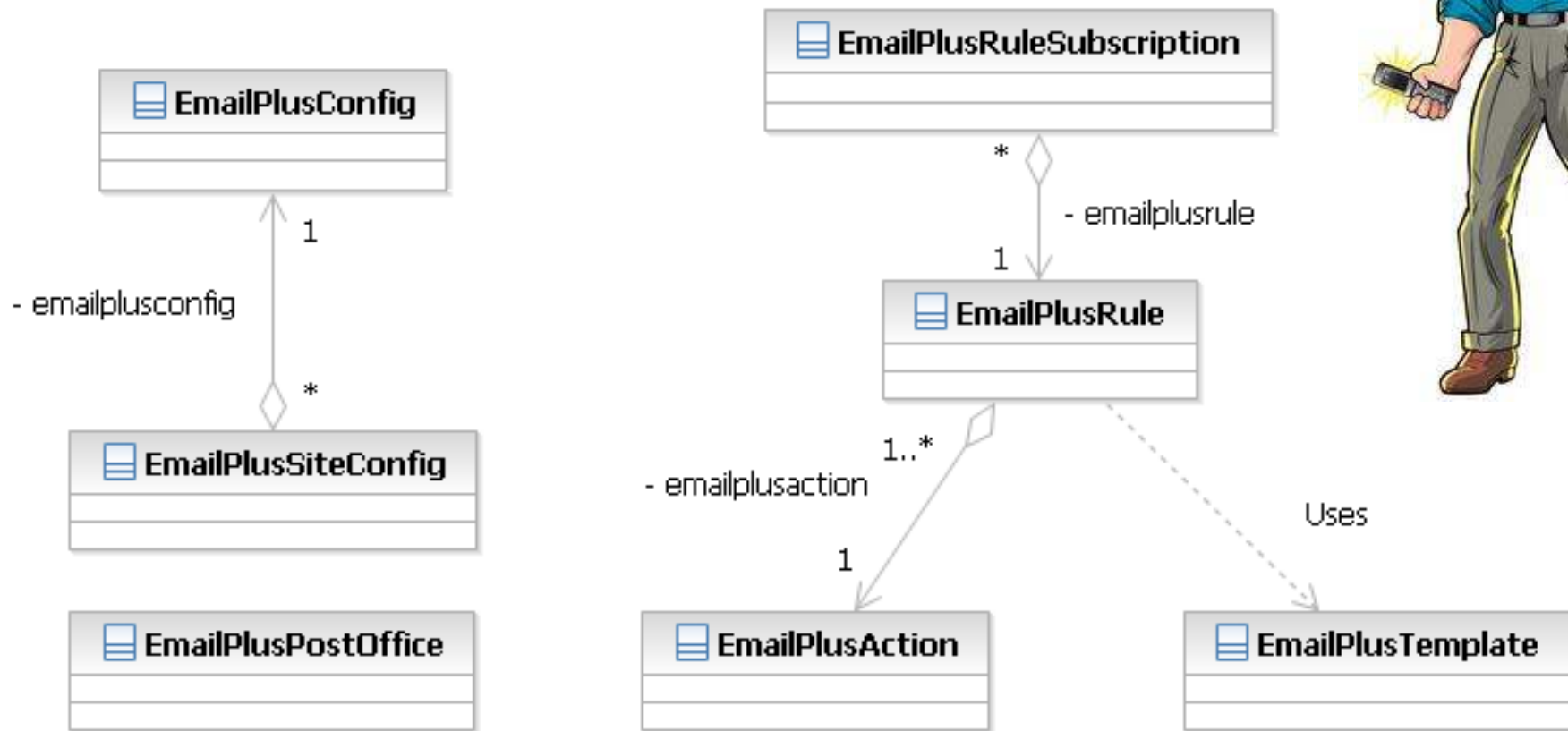


## What Does EmailPlus Give Me?

- ✓ Rich Content including:
  - Embedded Graphics including ClearQuest Charts
  - Hyperlinks / URLs to Records, Queries, Charts & Reports
  - Use text effects such as font, size, bold and colour
  - Add File Attachments from the triggering record
- ✓ Vastly Extended Rules Capabilities
  - Doesn't Use Queries
  - No longer limited to just data in the triggering record
  - Can use:
    - VBScript built-in Functions / Functions in your Schema
    - ClearQuest API functions
- ✓ Users can Self Subscribe to rules and Record changes at admin discretion



# How Does it Work?



# EmailPlus Configuration Record



EmailPlus Configuration

EmailPlus Active

CQ Email Admin: admin      Mastership: <local>

Site Configurations

| SITE    | SMTPServerName | WebServer |
|---------|----------------|-----------|
| <local> | localhost      | localhost |

New      Remove

ID: 33554745

Apply  
Revert  
Print Record  
Actions

# EmailPlus Site Configuration Record - 1

**View EmailPlusSiteConfig**

SMTP Config | CQWeb Config

Site: <local>

Site that the following information applies to. Use <default> for sites that don't have explicit values

SMTP Server Name: localhost **1**

SMTP Port: **2**

Email Transport Type: CQMail **3**

SMTP From Address: ClearQuest@emp.com

SMTP Reply to Address:

Authentication

SMTP is Authenticating

SMTP uses Secure Password Authentication

NOTE: This information is collected for use by CUSTOM solutions to use. None of the Built in solutions use authenticating SMTP.

Note: When using SMTP RELAY as the transport type, the SMTP port and server names refer to the RELAY service.

Post Office Mastership Site: **3**

Mastership: <local>

OK  
Cancel  
Print Record  
Actions ▾

## EmailPlus Site Configuration Record - 2

View EmailPlusSiteConfig

SMTP Config CQWeb Config

Web Server: localhost

Web Server Port: 80

Web Server Protocol: http

Web User ID:

Web Password:

These credentials are used to construct a URL to a ClearQuest record in a generated email (if specified in an EMailPlus rule).  
The server credentials used will be either the:

- The web server for the site that matches the mastership of the recipients user record
- The web server specified in the default site record if there is no record that matches the recipients user record mastership

OK

Cancel

Print Record

Actions

## EmailPlus Templates - 1

The screenshot shows the 'Email Plus Template Definition' dialog box. At the top, there are four tabs: 'Email Plus Template Definition' (selected), 'Templates', 'Using Rules', and 'Attachments'. The main title is 'Email Template' with a mail icon on the left and 'Mastership: <local>' on the right. Below the title, there is a 'Record Type:' dropdown menu set to 'Defect'. The 'Template Name:' field contains 'Owner Change'. Under 'Template Kind:', there are three radio buttons: 'Special Interest', 'Ownership' (selected), and 'Rule'. Below these are three explanatory paragraphs: 'A Special Interest Rule is used to notify people who have subscribed to specific record(s) when they change. There can only be one of these per record type', 'An Ownership template is used to notify the old and new owners of a record when ownership changes. Owner field(s) are identified in the schema. There can only be one of these per record type', and 'A Rule type template is used with one or more EMail Rules to notify people of specified events. You may have many of these.' The 'Description:' field contains the text 'This template is used to send a message to the owner of a record when ownership changes'. On the right side, there are buttons for 'Apply', 'Revert', 'Print Record', and an 'Actions' dropdown menu. At the bottom left, there are navigation icons and the text 'ID: 33554749'.



## EmailPlus Templates - 2

Email Plus Template Definition | Templates | Using Rules | Attachments

Email Template Subject:

Email Template Body:  Template Body is HTML

Dear #@NameOfUserInField:Owner@#,

You are receiving this email because you have been nominated as the new owner of the ClearQuest record ID:#?ID?#.

Here are a few pieces of information from the record:  
Priority: #?Priority?#  
Headline: #?headline?#

For more details login to ClearQuest or follow the link below for direct access to the record via ClearQuest Web

-- ClearQuest EmailPlus

Rule: #@NameOfRule  
Link: #@URLofEntity@#  
Change Actioned by: #@ActionerUserName@#

NOTE: When the template body is HTML, the content of the template should include all the necessary tags between <BODY> and </BODY>. HTML content is only possible through the non CQ email transport options or possibly through any custom solution.

ID: 33554749

Template is boilerplate text with embedded substitution tags

Tags are:  
Old Field Value  
New Field Value  
Meta Tags

Meta Tags:  
Built in or  
Custom

## Template Tags

- Replace tag with Current Field Value  
e.g. `#{?state?#}`
- Replace tag with Old Field Value  
e.g. `#{%state%#}`
- Replace Meta Tag with tag value  
e.g. `#{@NameOfRule@#}`
- Create **Your Own Custom** Meta tags
- Use Arbitrary VBScript Expressions
- Embed field tags in Expressions
  - Operate on Field Value
    - `#{@expression::formatdatetime(#{?submit_date?#,1})@#}`

### Available Meta Tags

|                           |
|---------------------------|
| ■ URLofEntity             |
| ■ URLofQuery              |
| ■ URLofChart              |
| ■ URLofReport             |
| ■ ActionerUserName        |
| ■ NameofUserInField       |
| ■ NameOfRule              |
| ■ AttachmentByName        |
| ■ AttachmentByDescription |
| ■ EmbedChart              |
| ■ Expression              |





## Example HTML Based Template

```


<H1>New Defect Submission # #?ID?#</H1>
<B>Severity: </B><font color="#@expression::AorB(#?Severity?# = "1-Critical", "red",
"green")@#">#?Severity?#</font>
<B>Submission Date :</B> #@expression::formatdatetime(#?submit_date?#,1)@#<BR>
<B>This Defect was submitted by: </B>#?submitter.fullname?#(#?submitter?#)<br>
<B>Email: </B> #?Submitter.email?#<BR>
<H2><font color="green">Headline:#?Headline?#</font></H2><BR>
<B><font color="green">Description :</B>#?Description?#</font><BR>
<H2>Current Workload Assignment</H2><BR>
#@embedchart::Public Queries/Distribution Charts/Active Defects by Owner::::@#<BR>
<B>ClearQuest</B><BR>
--//---<BR>
<B>Generating Email Rule Name: </B>#@NameOfRule@# <BR>
<B>Actioner User Name:</B> #@ActionerUserName@#<BR>
<H3>#@URLofEntity::ClearQuest Web Link to New record @#</H3>

```

## Example Generated Email

- Template is an HTML Body part
- Mail Transport used – SMTP Direct



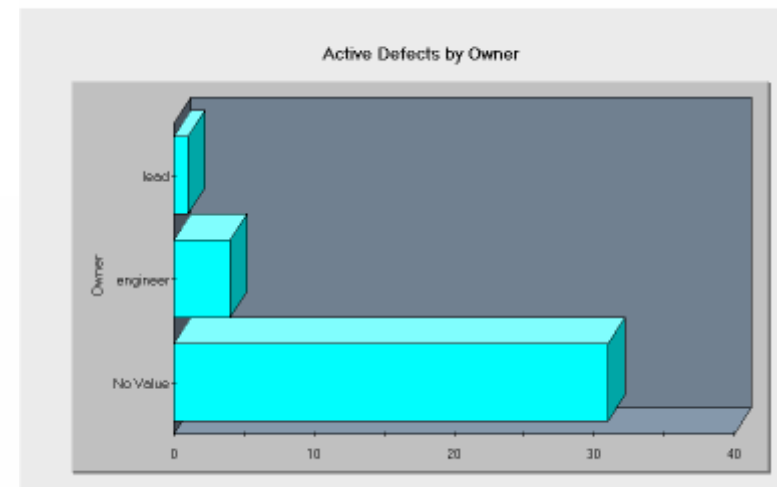
### New Defect Submission # SAMPL00000054

Severity: 1-Critical Submission Date : 26 August 2008  
 This Defect was submitted by: ClearQuest Administrator(admin)  
 EMail: cqadmin@home.com

#### Headline: A New defect has been born

**Description :** This new defect occurred while I was running the automated test suite. I noticed that there was an inconsistency in terminology used. In more places the word Logon is used, but on this screen it says Login

Current Workload Assignment



ClearQuest

--//---

Generating Email Rule Name: New Defect Submitted

Actioner User Name: ClearQuest Administrator

[ClearQuest Web Link to New record](#)

# EmailPlus Rules - 1

Simple Rule  
of up to 5  
Clauses

No Database  
Query Involved

All rule  
evaluation done  
in Memory – All  
Rules cached

# EmailPlus Rules - 2

Email Plus Rule  
  Actions / States  
  Advanced Rule  
  To / CC Addresses  
  Subscribers  
  Debug

---

**Action Conditions**  
 Actions:  ...  
 Action Types:  ...  
 OR    One of    OR    One of

This condition combines the State Transitions with other conditions in the rule. e.g. AND(SourceStates OR DestStates)

**State Transitions**  
 Source States:  ...  
 Destination States:  ...  
 OR    One of    OR    One of

Select 'AND' for any of the Source States AND any of the Destination States.  
 Select 'OR' for any of the Source States OR any of the Destination States.

ID: 33554761

Retains State and Action Capabilities of old package



## EmailPlus Rules - 3

The screenshot shows the 'Advanced Rule' configuration window in the EmailPlus application. The window has several tabs: 'Email Plus Rule', 'Actions / States', 'Advanced Rule', 'To / CC Addresses', 'Subscribers', and 'Debug'. The 'Advanced Rule' tab is selected. A dropdown menu is set to 'AND'. Below it, a text box contains the following VBScript expression: `Gfv("Severity")= "1 - Critical" OR Gfv("Priority")= "1 - High" OR OneOf(array( "Modify"), GetActionName) OR OneOf(array( "SUBMIT"), EMP_GetActionTypeName)`. A 'Validate Rule' button is present, and a status bar below it shows 'VALIDATED'. A note at the bottom explains that the rule can be any valid VB boolean expression and can use any VBScript functions and functions in the schemas global scripts. The ID of the rule is 33554761.

Apply

Re

Print F

Actio

AND Select Appropriate Boolean Operator if you want to use and Advanced Rule Component  
The rule is added to the rest of the expression as either "AND (Advanced Rule) " or "OR(Advanced Rule) "

Advanced Rule:

```
Gfv("Severity")= "1 - Critical" OR Gfv("Priority")= "1 - High" OR OneOf(array( "Modify"), GetActionName) OR OneOf(array( "SUBMIT"), EMP_GetActionTypeName)
```

Validate Rule This Button allows you to validate the Advanced Rule expression.

VALIDATED

The Advanced Rule can be "ANY" valid VB boolean Expression. You can use "ANY" VBScript functions and "ANY" Functions in your schemas global Scripts. This allows you to create very rich conditional expressions.

ID : 33554761

Arbitrarily  
Complex  
Expressions

Can Use VB,CQ  
APIs

Can call VB  
Functions in  
your CQ  
Schema

# EmailPlus Rules - 4

Retains Addressing Capabilities of old package

Allows indirect user references to other records

## EmailPlus Rules - 5

Subscriber Lists

| RuleName       |
|----------------|
| rat_mastership |

New Remove

Permitted Subscriber Groups:

NOTE: Changing the group list (or group membership) will NOT unsubscribe members who are no longer eligible. If you dont specify at least one group, everyone is allowed.

ID: 33554761

Users can 'Self-Subscribe' to rules at administrators discretion.

Subscription controlled by group membership.

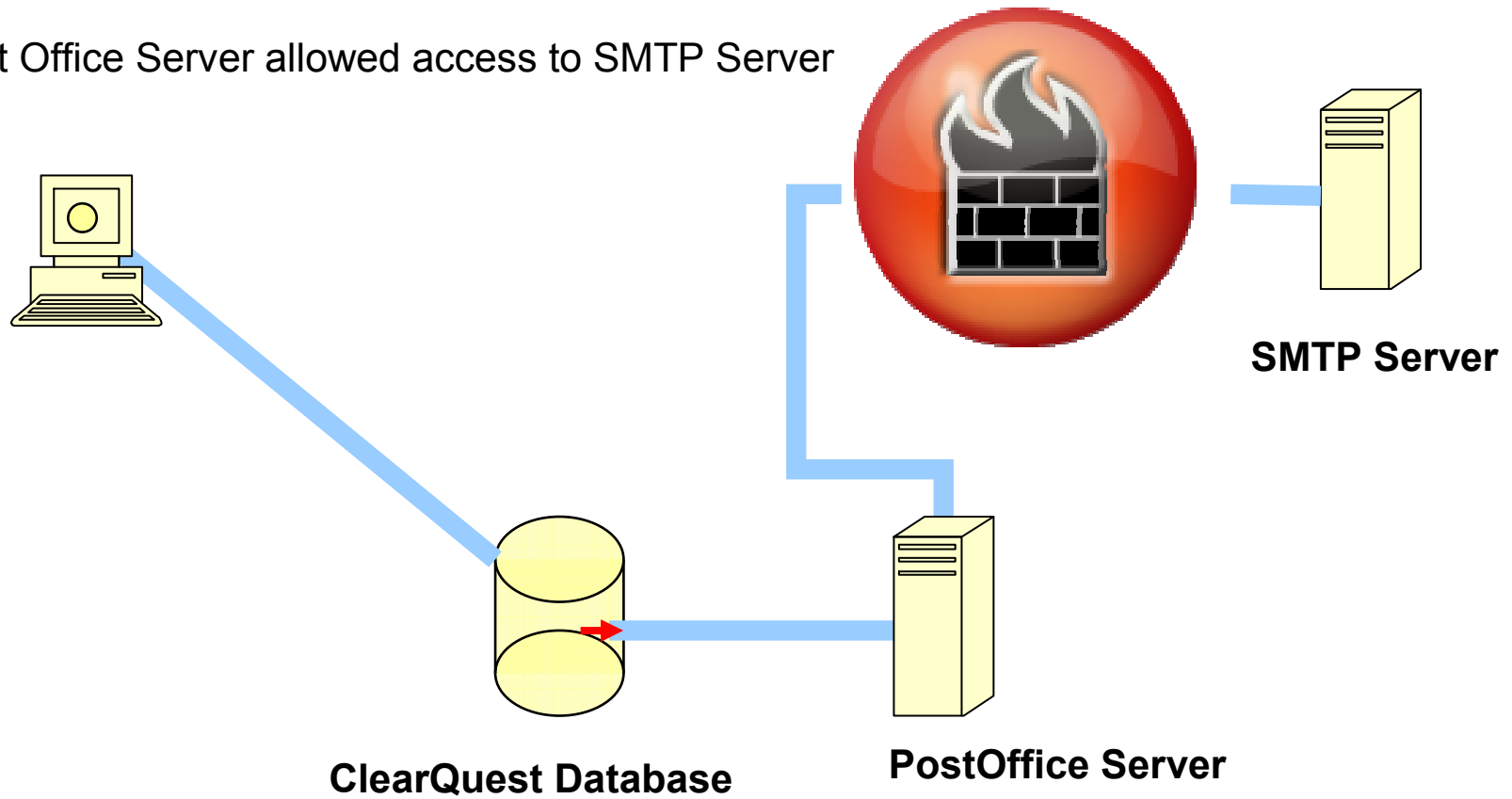
## Features By Mail Transport Types

| FEATURES             | CQ<br>MAIL | SMTP<br>Direct | SMTP<br>Relay | PostOffice Relay |           | Custom |
|----------------------|------------|----------------|---------------|------------------|-----------|--------|
|                      |            |                |               | CQ Mail          | 3rd Party |        |
| Templates            | Y          | Y              | Y             | Y                | Y         | ?      |
| Email Rules Simple   | Y          | Y              | Y             | Y                | Y         | ?      |
| Email Rules Advanced | Y          | Y              | Y             | Y                | Y         | ?      |
| HTML Content         | N          | Y              | Y             | N                | Y         | ?      |
| Mail Headers         | N          | Y              | Y             | N                | Y         | ?      |
| Embedded Graphics    | N          | Y              | Y             | N                | Y         | ?      |
| Attachments          | N          | Y              | Y             | N                | Y         | ?      |
| Mail Relay           | Y/N        | Y              | Y             | Y                | Y         | ?      |
| Subscriptions        | Y          | Y              | Y             | Y                | Y         | ?      |
| Multisite Support    | Y          | Y              | Y             | Y                | Y         | ?      |
| UNIX Platform        | N          | N              | N             | N                | N         | N      |
| Windows Platform     | Y          | Y              | Y             | Y                | Y         | Y      |

Some Modes Require a free 3<sup>rd</sup> Party Component to be installed

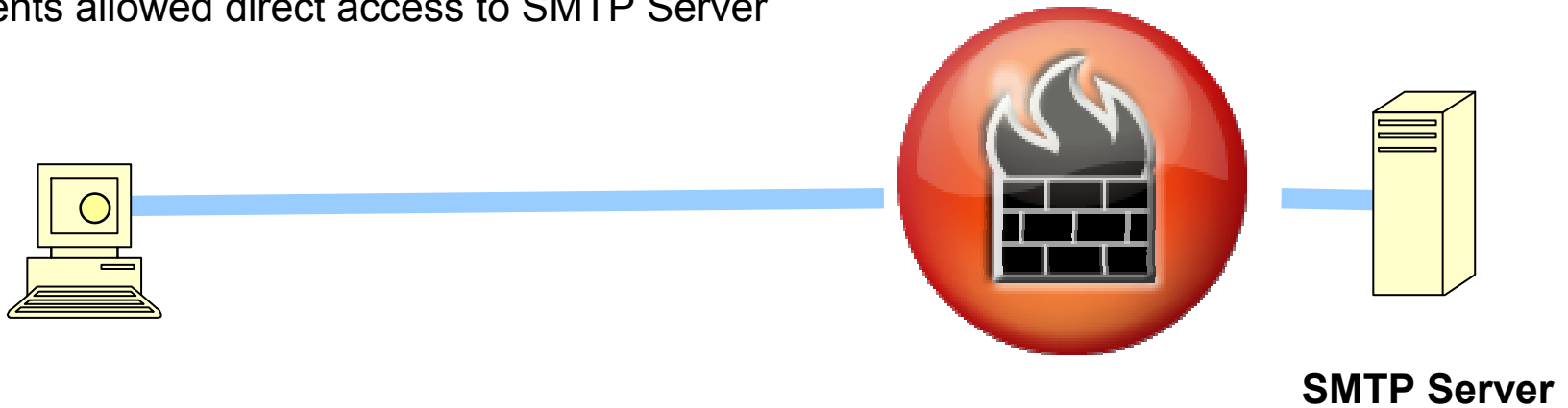
# Post Office Mode

Post Office Server allowed access to SMTP Server



## SMTP Direct Mode

Clients allowed direct access to SMTP Server

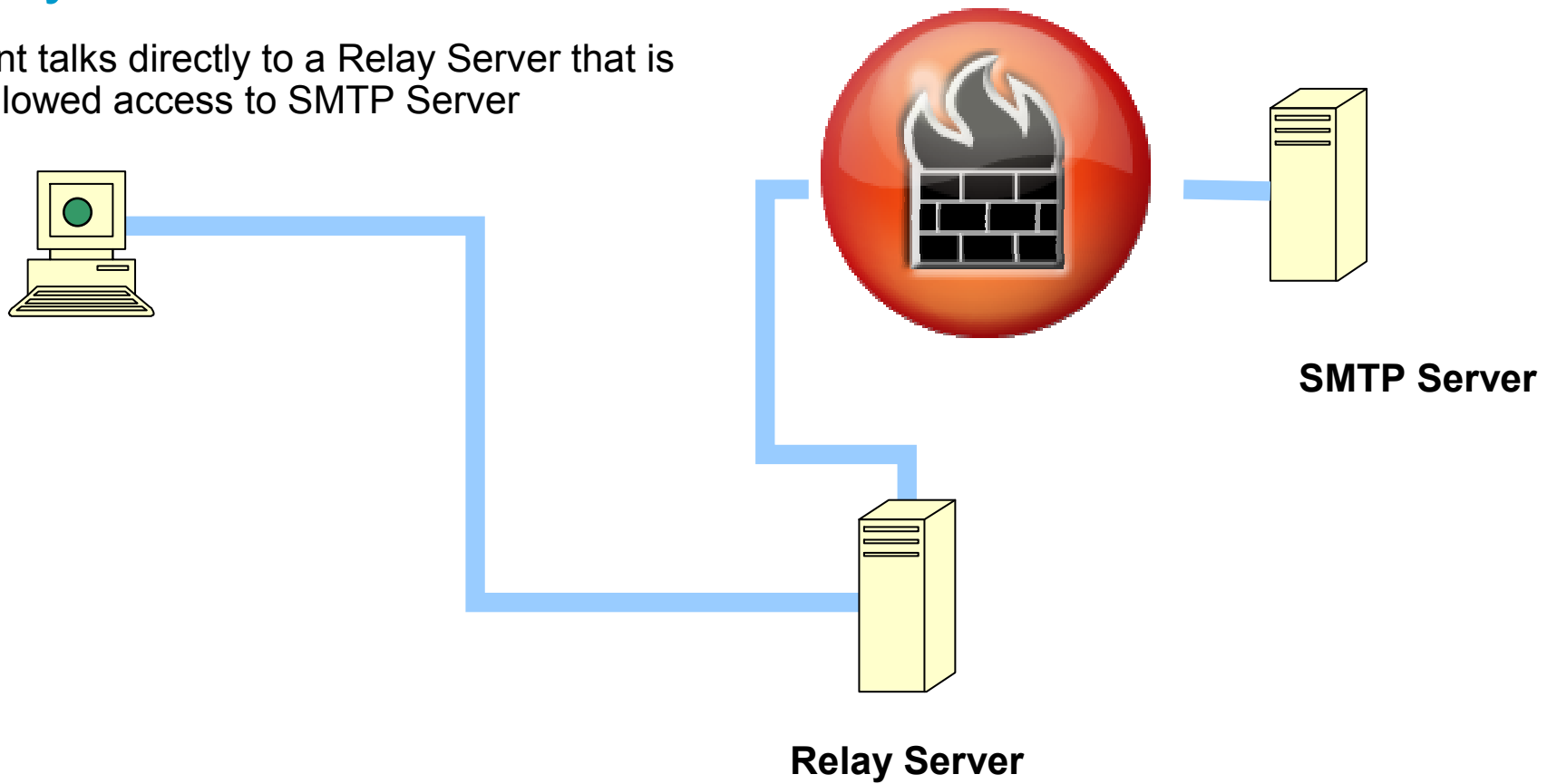


- Can use Either:
  - ClearQuest Email Component
  - Third Party Email Client Component



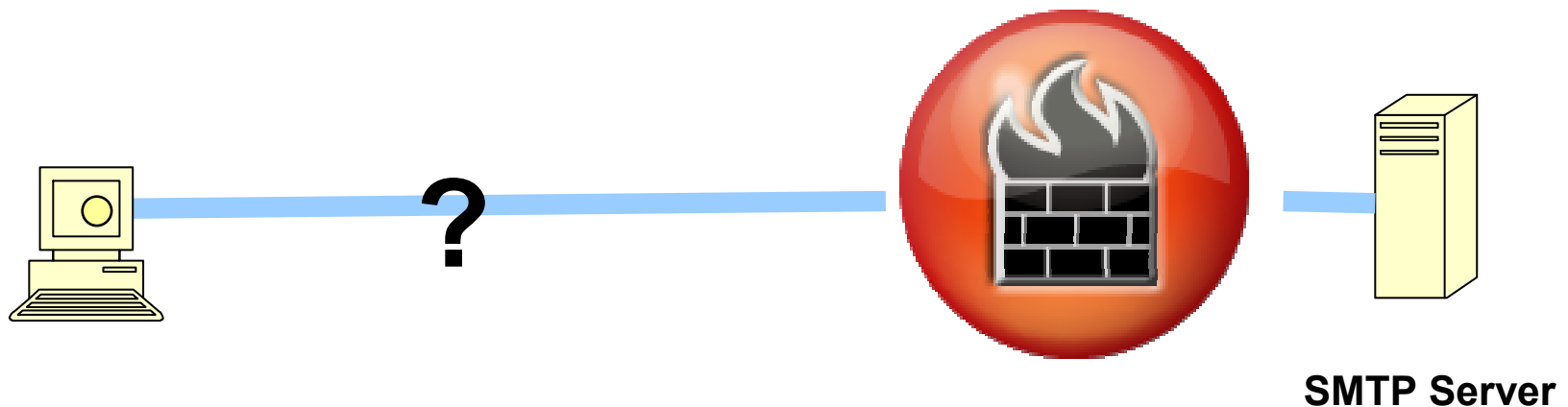
## Relay Mode

Client talks directly to a Relay Server that is allowed access to SMTP Server



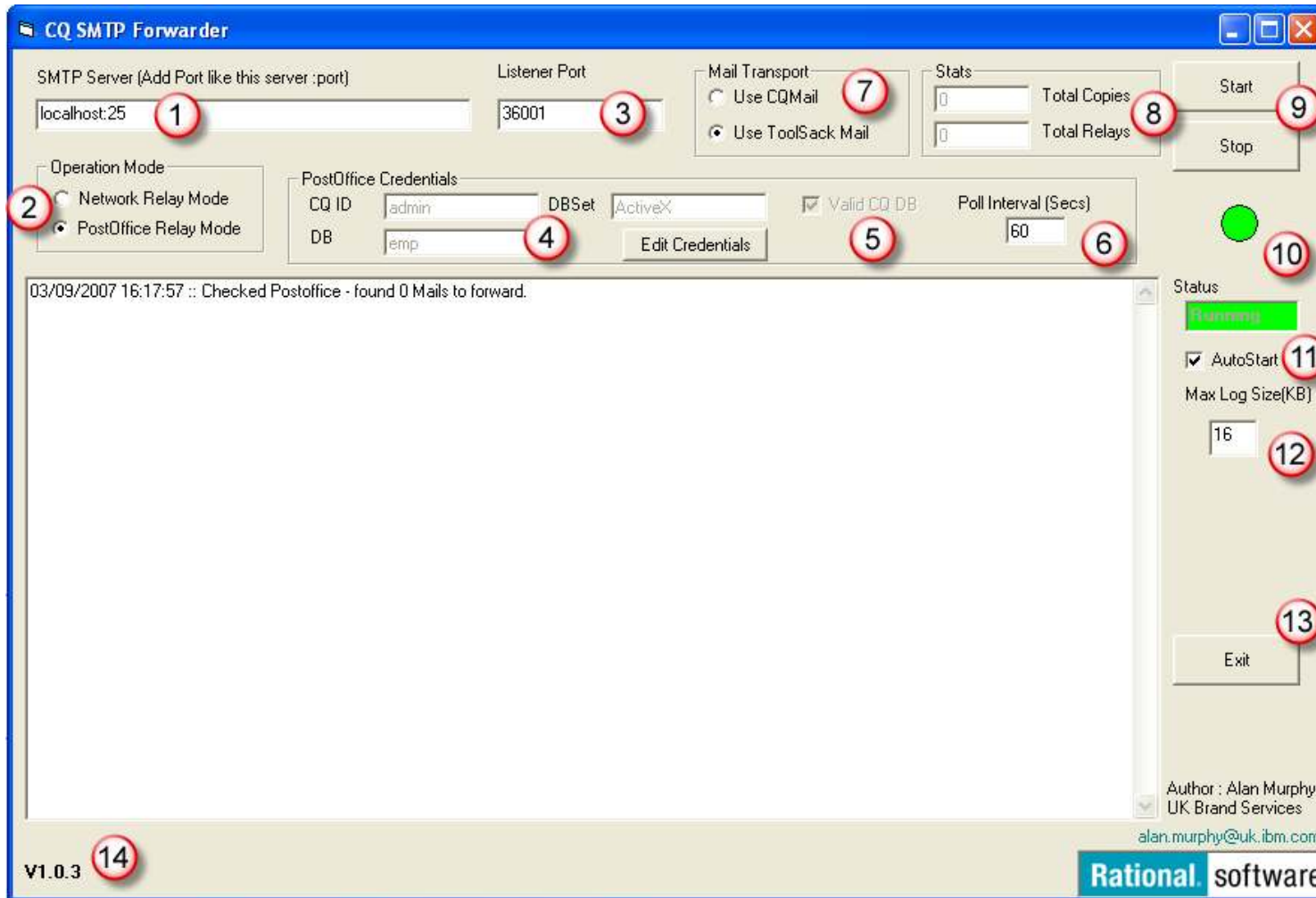
## Custom Mode

Clients Sends Email However YOU Choose



- Can be customised to use whatever mechanism YOU want to use.
- Provides a Template routine which you provide the implementation of
  - Must be in VBScript even in a PERL schema.
    - Cannot call PERL routines in your schema

# EmailPlus Post Office & Relay Component



## How do You Get EmailPlus ?

- EmailPlus is Offered as an IBM Rational Services Engagement
  - 2 or More days depending on
    - Client Experience
  - Basic Service Includes:
    - Installation of Package and Relay Component as required
    - Configuration
    - Administrator Training
    - Converting Existing rules
    - Authoring New rules and templates
  - Support and Enhancements are offered on a Services Engagement Basis
  - Updates Free as they become available
    - Client Install or through paid Services



## RU Ready For EmailPlus?

- Like What you've Seen?
- Want to Know More ?
- Contact:



Alan Murphy  
[alan.murphy@uk.ibm.com](mailto:alan.murphy@uk.ibm.com)

- Or Look for us around the Change & Release Management Pedestal during the event.



Mark Calder  
[calderma@uk.ibm.com](mailto:calderma@uk.ibm.com)



Mark Roberts  
[markroberts@uk.ibm.com](mailto:markroberts@uk.ibm.com)

# Questions





**Thank You**

