PAMtutorials 17: Workflow – Invalid e-mail addresses

Not known at this address….

PIPER-Rx Application Monitor – PAM
VIRTUAL APPS ADMINISTRATOR

PAM Version 4.0
"Blurring the line between software product and training"

May 2012

Table of Contents

1   What you'll get out of *PA*Mtutorials 17

Generally speaking, e-mail forms the cornerstone of notifications from the OEBS (**O**racle **E**-**B**usiness **S**uite) application, particularly the workflow application.

Unfortunately, an invalid e-mail address can result in any number of applications issues depending on where that e-mail address is used. The loss of business and the business resources required to identify and rectify these issues can be quite large and very time consuming.

To add a further degree of complexity, it may not be the primary responder of the workflow that has the incorrect e-mail address as notifications can be transferred or forwarded; in each case the new target e-mail address must be correct.

The one saving grace in these scenarios is that if there are any missing or invalid e-mail address it will most likely result a notification error and adding an entry into the SYSADMIN work list…. ☺ I am sure someone will get sick of the entries and correct the problem…..(yeah, right!)

Given the propensity for null and invalid e-mail addresses to clog up workflow, if you find just one e-mail address that gets fixed where subsequent workflow notifications do not get sent to an invalid address or generate a workflow error, then it's worth the effort.

PAMtutorials 17 provides a range of initiatives to help you prevent invalid e-mail address issues within your OEBS application.

2   What happens when an invalid e-mail address is encountered?

When the notification mailer cannot deliver a notification as a result of the e-mail address being invalid, it:

- ❖ Sets the notification mail status to **FAILED**
- ❖ Adds the e-mail address to its own invalid e-mail address list. On any subsequent request to send a notification to an address recorded in the notification mailers invalid address list, the notification mailer sets the mail status to **FAILED** <u>without attempting to send the notification</u>.
- ❖ Changes the notification preference of the recipient to **DISABLED**.
- ❖ Sends a notification to the SYSADMIN (default) user detailing that one or more notifications could not be sent and that the offending users notification preference has been set to **DISABLED**

> **Note:** I believe that each notification mailer stores up to 100 e-mail addresses in its invalid address list. When more e-mail addresses are added to the list the oldest addresses drop out first. Also, stopping and starting the notification mailer clears the list.

3   Synchronisation

The **WF_LOCAL_ROLES** and **WF_LOCAL_ROLES** tables store user and role information originating from various other Oracle Applications modules. The information in these objects are synchronised from base application tables using the WF synchronisation concurrent programs including, but not limited to, the following concurrent programs:

 ❖ **Sync responsibility role data into the WF table**
 ❖ **Synchronise Workflow LOCAL Tables**

Note: The synchronisation process is version specific and highly customisable

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4   Validating e-mail addresses

The best method of validating an e-mail address is to actually send an e-mail to the address and check to ensure it did not bounce. However, sending unsolicited e-mails even on an ad hoc basis can be viewed as SPAM and is therefore undesirable and in some cases illegal so another solution is required.

Many sites seek to deal with this issue by ensuring that any account, user, vendor etc. that does not have an e-mail address is assigned to the e-mail address of the workflow administrator or the like. That way if the address is used the workflow administrator is immediately notified.

Also business policy often requires that once an e-mail address is no longer valid, that e-mail address is identified and changed within the OEBS application, so the best Application Administrators tend to be proactive on this issue.

A good option is to perform a series of validation checks on e-mail addresses. *PAMtutorials* 17 features a range of e-mail validation checks which are covered in detail in this tutorial.

4.1   *PAM* E-mail Validation Checks

The *PAM* e-mail address validation process applies the following validation checks to each e-mail address validated by *PAM*:

- ❖ E-mail address length must be greater than 5 values (a@a.a)
- ❖ Only one @ symbol is allowed
- ❖ An @ symbol and a dot must not appear together
- ❖ First or last element cannot be an @ symbol
- ❖ There must be at least one dot
- ❖ Two dots must not appear together
- ❖ First or last element cannot be a dot
- ❖ There must be at least one dot after the @ symbol
- ❖ A hyphen must not appear directly before or after the @ symbol
- ❖ Two hyphens must not appear together
- ❖ First or last element cannot be a hyphen
- ❖ A hyphen must not appear directly before or after the @ symbol
- ❖ A domain cannot end with a hyphen
- ❖ Invalid characters

In addition there are two further *PAM* validation checks:

4.1.1   *PAM* banned address

This is a list of domains that your site does not allow such a public domain e-mail addresses like gmail, yahoo…

4.1.2   Valid Domains Check

This *PAM* check alerts if an e-mail domain does not exist in the *PAM* valid domains list.

Not only does this feature allow you to pick up domains that are not in your valid list, more importantly it allows you to pick possible incorrect spelling issues such as piper-rx.**con** a common mistake as the letters n and m are next to each other on the keyboard. How to add and remove domains from the *PAM* check is covered in detail later in this tutorial.

These methods of validation are not 100% fool proof by any stretch of the imagination, but even if you identify and correct only a few addresses, you will at least have been able to demonstrate proactivity on this issue and you will be saving valuable time and money.

4.2   Why doesn't *PAM* use Oracle's Regular Expressions functions?

You may note when reviewing the PLSQL code *PAM* does not use the Oracle database Regular Expressions functions to check for invalid special characters etc., in the e-mail address. The reason for this is quite simple, the regular expressions feature only exists in Oracle 10g; at the time of writing there are still OEBS sites running on oracle version 9 and *PAM* aims to be as version independent as possible.

4.3   What e-mail addresses does the *PAM* validation check cover?

PAM does **not** check all database objects that contain e-mail addresses, *PAM* has limited the number of objects checked to those the form the core of the application and are most likely used by the workflow application. Whilst we fully understand this is not the full list of Oracle applications objects that store e-mail addresses, it's a good start.

Note: Additional objects can be added to the *PAM* e-mail validation module on request.

5   APPLSYS.FND_USERS

Once per day (default) each e-mail address associated with an application account that has either been created, maintained or accessed will be validated.

For the technically minded, *PAM* uses the following SQL clause to include accounts that have been created, maintained or accessed since the last *PAM* check.

```
WHERE ( fu.last_update_date  >  v_last_check_date
         or
          fu.last_logon_date  >  v_last_check_date )
```

Note 1: When a record is created both the last_update_date and creation_date are set to the date and time the record was created.

Note: User accounts that have been "end dated" will not validated

5.1   *PAM* e-mail validation alert – FND_USERS

When an **fnd_users** account is either created, updated or accessed, the e-mail address of that account will be validated. If that validation fails *PAM* will generate an alert:

Example *PAM* EV-001 – *PAM* e-mail validation fnd_users - alert message

ALERT MESSAGE FROM *PAM* - PIPER-Rx Application Monitor - DO NOT REPLY

Company = Company Name
Site = APPS 12i
Alert Level = **Informational**
Detected = 23-Nov-11 (Wed) 15:00:05
Alert Frequency = 1 Day

The e-mail address gary@piper%rx.com for the fnd_user account GPIPER (E--) failed - invalid character

---

Alert Information:

EV-001 Invalid / banned APPLSYS.FND_USER e-mail address detected.

An e-mail address in the **FND_USER** table has been found to have either an invalid format or a banned *PAM* domain.

This alert will be raised if the e-mail address format is invalid or the e-mail address domain is either banned or not in the *PAM* valid domains list.

PAM will validate an **FND_USER** account e-mail address whenever that account has been created, maintained or accessed.

You can use *PAMreports* - e-mail **PAMEV022 E-mail Validation fnd_user** to list any invalid or banned e-mail addresses in the **FND_USER** table.

A list of banned domains can be found using *PAMreports* - e-mail **PAMEV003 Banned E-mail Domains**.

A list of valid domains can be found using *PAMreports* - e-mail **PAMEV001 Valid E-mail Domains.**

Note: The following key is appended to each account name to indicate if the account has been configured as an Employee, Customer or Supplier and recorded as such in the *fnd_user* table:
  (E--)   Employee
  (-C-)   Customer
  (--S)   Supplier

5.2   What to do with this information

It is important to ensure all e-mail addresses are valid as these values are used to synchronise the workflow objects.

If you wish to list all invalid e-mail addresses for currently active user accounts you can use *PAMreports* - e-mail PAMEV022 E-mail Validation fnd_user**:**

Example PAMEV022 E-mail Validation fnd_user report

PAMEV022-30	PAM - PIPER-RX - APPLICATION MONITOR E-mail Address Validation - FND_USERS As at 09-OCT-11 22:35 For SITE NAME NOT SET	PIPER-Rx

Application Account	E-Mail Address	Failure Reason
AALAMOUDI@VISIONSA.COM (E--)	nobody@localhost	insufficient dots
AALLEN (E--)	nobody@localhost	insufficient dots
AALVI (E--)	nobody@localhost	insufficient dots
AAPEX (-C-)	nobody@localhost	insufficient dots
AAWANG (-C-)	nobody@localhost	insufficient dots
ABEAULIE (-C-)	nobody@localhost	insufficient dots
ABERTHIE (E--)	nobody@localhost	insufficient dots

> **Note:** The following key is appended to each account name to indicate if the account has been configured as an Employee, Customer or Supplier and recorded as such in the *fnd_user* table:
>
> (E--)   Employee
> (-C-)   Customer
> (--S)   Supplier

5.3 *PAM* e-mail validation checks

The following refers to each of the *PAMreports* - e-mail that report on specific application base tables. As mentioned above there are two *PAM* specific e-mail validation checks:

❖ Banned domains
❖ Valid domains

Where these checks have been disabled (covered later in this tutorial) the words "**Excludes PAM domain exception checks**" will be displayed at the bottom of the report.

PAM also provides the ability to exclude known "valid" e-mail addresses that otherwise would be considered invalid by the *PAM* e-mail validation checks. The number of excluded e-mail accounts will be displayed at the bottom of the report:

This option is covered later in this tutorial.

5.4 Turning the FND_USERS e-mail validation alert off and on

The **PAM** FND_USERS e-mail validation alert can be turned off using the following **PAM** API:

```
exec PIPER_RX_PAM_API.PAM_ALERT_ENABLE ( 'EV-001', 'N');
```

The alert can be re-enabled using the following **PAM** API:

```
exec PIPER_RX_PAM_API.PAM_ALERT_ENABLE ( 'EV-001', 'Y');
```

6 HR.PER_PEOPLE_F

Once per day (default) each e-mail address associated with an employee record that has either been created or maintained will be validated.

For the technically minded, *PAM* uses the following SQL clause to include records that have been created or maintained since the last *PAM* check.

```
WHERE (papf.effective_end_date is not null
    or papf.effective_end_date > sysdate)
  and papf.current_employee_flag = 'Y'
  and papf.last_update_date > v_last_check_date -- If employee record is created or maintained
  and date_of_death is null -- Dont alert when they die...
```

Note: When a record is created both the last_update_date and creation_date are set to the date and time the record was created.

6.1 *PAM* e-mail validation alert – HR.PER_PEOPLE_F

When an employee record is either created or updated the e-mail address of that account will be validated. If that validation fails *PAM* will generate an alert:

Example *PAM* EV-002 – *PAM* E-mail Validation HR.PER_PEOPLE_F - alert message

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ALERT MESSAGE FROM *PAM* - PIPER-Rx Application Monitor - DO NOT REPLY

Company = Company Name
Site = APPS 12i
Alert Level = **Informational**
Detected = 23-Nov-11 (Wed) 15:00:05
Alert Frequency = 1 Day

The email address gary%@piper_rx.com for the employee GPIPER failed - invalid character

---

Alert Information:

EV-002 Invalid / banned HR.PER_PEOPLE_F e-mail address detected.

An e-mail address in the **HR.PER_PEOPLE_F** table has been found to have either an invalid format or a banned *PAM* domain.

This alert will be raised if the e-mail address format is invalid or the e-mail address domain is either banned or not in the *PAM* valid domains list.

PAM will validate each **HR.PER_PEOPLE_F** e-mail address whenever a record has been created or maintained.

You can use *PAMreports* - e-mail **PAMEV023 E-mail Validation per_people_f** to list any invalid or banned e-mail addresses in the **HR.PER_PEOPLE_F** table.

A list of banned domains can be found using *PAMreports* - e-mail **PAMEV003 Banned E-mail Domains**.

A list of valid domains can be found using the *PAMreports* - e-mail **PAMEV001 Valid E-mail Domains**.

6.2   What to do with this information

If you wish to list all invalid e-mail addresses for currently active employees you can *PAMreports* - e-mail PAMEV023 e-mail Validation per_people_f:

Example PAMEV023 e-mail Validation per_people_f report

6.3   Turning the HR.PER_PEOPLE_F e-mail validation alert off and on

The *PAM* **PER_PEOPLE_F** e-mail validation alert can be turned off using the following *PAM* API:

```
exec PIPER_RX_PAM_API.PAM_ALERT_ENABLE ( 'EV-002', 'N');
```

The alert can be re-enabled using the following *PAM* API:

```
exec PIPER_RX_PAM_API.PAM_ALERT_ENABLE ( 'EV-002', 'Y');
```

7   AR.RA_CONTACTS

Once per day (default) *PAM* will validate all e-mail addresses for ra_contacts records that have been maintained based on the record's last_lupdate_date value since the last *PAM* e-mail validation check.

For the technically minded, *PAM* uses the following SQL clause to include records that have been created or maintained since the last *PAM* check:

```
WHERE rc.last_update_date > v_last_check_date
  and rc.status = 'A'
```

Note: When a record is created both the last_update_date and creation_date are set to the date and time the record was created.

7.1   *PAM* e-mail validation alert – AR.RA_CONTACTS

When an ar_contacts record is either created or updated the e-mail address of that record will be validated. If that validation fails *PAM* will generate an alert:

Example *PAM* EV-003 – *PAM* e-mail validation AR.RA_CONTACTS - alert message

ALERT MESSAGE FROM *PAM* - PIPER-Rx Application Monitor - DO NOT REPLY

Company = Company Name
Site = APPS 12i
Alert Level = **Informational**
Detected = 23-Nov-11 (Wed) 15:00:05
Alert Frequency = 1 Day

The e-mail address gary%@piper_rx.com for the RA contacts contact GPIPER failed - invalid character

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Alert Information:

EV-003 Invalid / banned AR.RA_CONTACTS e-mail address detected.

An e-mail address in the **AR.RA_CONTACTS** table has been found to have either an invalid format or a banned *PAM* domain.

This alert will be raised if the e-mail address format is invalid or the e-mail address domain is either banned or not in the *PAM* valid domains list.

> *PAM* will validate each **AR.RA_CONTACTS** e-mail address whenever a record has been created or maintained.
>
> You can use *PAMreports* - e-mail **PAMEV024 E-mail Validation ra_contacts** to list any invalid or banned e-mail addresses in the **AR.RA_CONTACTS** table.
>
> A list of banned domains can be found using *PAMreports* - e-mail **PAMEV003 Banned E-mail Domains**.
>
> A list of valid domains can be found using *PAMreports* - e-mail **PAMEV001 Valid E-mail Domains**.

7.2   What to do with this information

If you wish to list all invalid e-mail addresses for currently active contacts you can use *PAMreports* - e-mail PAMEV024-30 e-mail Validation ra_contacts:

Example PAMEV024-30 e-mail Validation ra_contacts report

PAMEV024-30	PAM - PIPER-RX - APPLICATION MONITOR E-mail Address Validation - AR.RA_CONTACTS As at 10-OCT-11 00:36 For SITE NAME NOT SET	PIPER-Rx
Contact Name	**E-Mail Address**	**Failure Reason**
Martin Cindy	ckoch@us.oracle.com	domain does not exist in the PAM valid domains list
Tom Johnson	tjohnson	insufficient dots
irina granat	rgranat@us.oracle.com	domain does not exist in the PAM valid domains list
tester11 tester11	tester11	insufficient dots
tester12 tester12	tester12@email	insufficient dots
tester22 tester22	tester22	insufficient dots

Invalid E-Mail Accounts: 6
Excluded E-Mail Accounts: 2

7.3   Turning the AR.RA_CONTACTS e-mail validation alert off and on

The *PAM* **AR.RA_CONTACTS** e-mail validation alert can be turned off using the following *PAM* API:

```
exec PIPER_RX_PAM_API.PAM_ALERT_ENABLE ( 'EV-003', 'N');
```

The alert can be re-enabled using the following *PAM* API:

```
exec PIPER_RX_PAM_API.PAM_ALERT_ENABLE ( 'EV-003', 'Y');
```

8   AR.HZ_PARTIES

Once per day (default) *PAM* will validate all e-mail addresses for hz_parties records that have been created or maintained based on the record's last_lupdate_date value since the last *PAM* e-mail validation check.

For the technically minded, *PAM* uses the following SQL clause to include records that have been created or maintained since the last *PAM* check.

```
WHERE hp.last_update_date > v_last_check_date
```

Note: When a record is created both the last_update_date and creation_date are set to the date and time the record was created.

8.1   *PAM* e-mail validation alert – AR.HZ_PARTIES

When a hz_parties record is either created or updated the e-mail address of that record will be validated. If that validation fails *PAM* will generate an alert:

Example *PAM* EV-004 – *PAM* e-mail validation AR.HZ_PARTIES - alert message

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ALERT MESSAGE FROM *PAM* - PIPER-Rx Application Monitor - DO NOT REPLY

Company = Company Name
Site = APPS 12i
Alert Level = **Informational**
Detected = 23-Nov-11 (Wed) 15:00:05
Alert Frequency = 1 Day

The e-mail address gary%@piper_rx.com for the hz_parties party GPIPER failed - invalid character

---

Alert Information:

EV-004 Invalid / banned AR.HZ_PARTIES e-mail address detected.

An e-mail address in the **AR.HZ_PARTIES** table has been found to have either an invalid format or a banned *PAM* domain.

This alert will be raised if the e-mail address format is invalid or the e-mail address domain is either banned or not in the *PAM* valid domains list.

PAM will validate each **AR.HZ_PARTIES** e-mail address whenever a record has been created or maintained.

You can use *PAMreports* - e-mail **PAMEV025 e-mail Validation hz_parties** to list any invalid or banned e-mail addresses in the **AR.HZ_PARTIES** table.

A list of banned domains can be found using *PAMreports* - e-mail **PAMEV003 Banned E-mail Domains**.

A list of valid domains can be found using *PAMreports* - e-mail **PAMEV001 Valid E-mail Domains**.

8.2   What to do with this information

If you wish to list all invalid e-mail addresses for currently active contacts you can use *PAMreports* - e-mail PAMEV025 e-mail Validation hz_parties:

Example PAMEV025 e-mail Validation hz_parties report

PAMEV025-30	PAM - PIPER-RX - APPLICATION MONITOR E-mail Address Validation - HZ_PARTIES As at 10-OCT-11 17:45 For SITE NAME NOT SET		PIPER-Rx
(Party Id) Party Name	**E-Mail Address**	**Failure Reason**	
(11365) Raddi Sindhu	rsindhu	insufficient dots	
(126786) Mike Rosendale	Email	insufficient dots	
(12680) Charles Owens	SOWENS	insufficient dots	
(12761) Paul Harris-Federal Pa...	PHARRIS	insufficient dots	
(133960) Paul Garrett	Email	insufficient dots	
(145490) Lydia Pattison	Email	insufficient dots	
(153533) Jack Kolden	Email	insufficient dots	
(158545) Anne Gomez	Email	insufficient dots	
(174622) Gale Benson	Email	insufficient dots	
(2517) tester22 tester22	tester22	insufficient dots	
(2518) Tom Johnson	tjohnson	insufficient dots	
(2520) tester11 tester11	tester11	insufficient dots	
(252865) Sue Jones	sue.jones	address must contain one @ symbol	
(2642) tester22 tester22-teste...	tester22	insufficient dots	

8.3   Turning the AR.HZ_PARTIES e-mail validation alert off and on

The *PAM* **AR.HZ_PARTIES** e-mail validation alert can be turned off using the following *PAM* API:

```
exec PIPER_RX_PAM_API.PAM_ALERT_ENABLE ( 'EV-004', 'N');
```

The alert can be re-enabled using the following *PAM* API:

```
exec PIPER_RX_PAM_API.PAM_ALERT_ENABLE ( 'EV-004', 'Y');
```

9   AP.AP_SUPPLIER_CONTACTS

Once per day (default) *PAM* will validate all e-mail addresses for ap.ap_supplier_contacts records that have been created or maintained based on the record's last_lupdate_date value since the last *PAM* e-mail validation check.

For the technically minded, *PAM* uses the following SQL clause to include records that have been created or maintained since the last *PAM* check:

```
WHERE apsc.email_address is not null
  and apsc.last_update_date > v_last_check_date
```

Note: When a record is created both the last_update_date and creation_date are set to the date and time the record was created.

9.1   *PAM* e-mail validation alert – AP_SUPPLER_CONTATCS

When an ap.ap_supplier_contacts record is either created or updated the e-mail address of that record will be validated. If that validation fails *PAM* will generate an alert:

Example *PAM* EV-009 – *PAM* e-mail validation AP_SUPPLIER_CONTACTS - alert message

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ALERT MESSAGE FROM *PAM* - PIPER-Rx Application Monitor - DO NOT REPLY

Company = Company Name
Site = APPS 12i
Alert Level = **Informational**
Detected = 23-Nov-11 (Wed) 15:00:05
Alert Frequency = 1 Day

The e-mail address gary%@piper_rx.com for the ap_supplier_contatcs GPIPER (21) failed - invalid character

---

Alert Information:

EV-009 Invalid / banned AP.AP_SUPPLIER_CONTACTS e-mail address detected.

An e-mail address in the **AP.AP_SUPPLIER_CONTACTS** object has been found to have either an invalid format or a banned *PAM* domain.

This alert will be raised if the e-mail address format is invalid or the e-mail address domain is either banned or not in the *PAM* valid domains list.

PAM will validate each **AP.AP_SUPPLIER_CONTACTS** e-mail address whenever a record has been created or maintained.

You can use *PAMreports* - e-mail **PAMEV026 E-mail Validation supplier_contacts** to list any invalid or banned e-mail addresses in the **AP.AP_SUPPLIER_CONTACTS** object.

A list of banned domains can be found using *PAMreports* - e-mail **PAMEV003 Banned E-mail Domains**.

A list of valid domains can be found using *PAMreports* - e-mail **PAMEV001 Valid E-mail Domains**.

9.2   What to do with this information

If you wish to list all invalid e-mail addresses for currently active contacts you can use *PAMreports* - e-mail PAMEV025 e-mail Validation supplier_contacts:

Example PAMEV025 e-mail Validation supplier_contacts report

PAMEV026-30	PAM - PIPER-RX - APPLICATION MONITOR E-mail Address Validation - AP.SUPPLIER_CONTACTS As at 06-DEC-11 16:51 For APPS 12i		PIPER-Rx
Vendor Contact (Vendor Contact Id)	**E-Mail Address**	**Failure Reason**	
Paul Wilson (2903)	e	Address too short	
Invalid E-Mail Accounts: 1			

9.3   Turning the AP.AP_SUPPLIER_CONTACTS e-mail validation alert off and on

The *PAM* **AP.AP_SUPPLER_CONTACTS** e-mail validation alert can be turned off using the following *PAM* API:

```
exec PIPER_RX_PAM_API.PAM_ALERT_ENABLE ( 'EV-009', 'N');
```

The alert can be re-enabled using the following *PAM* API:

```
exec PIPER_RX_PAM_API.PAM_ALERT_ENABLE ( 'EV-009', 'Y');
```

10 APPLSYS.WF_LOCAL_ROLES

Once per day (default) *PAM* will validate all e-mail addresses for wf_local_roles records that have been created or maintained based on the record's last_lupdate_date value since the last *PAM* e-mail validation check.

For the technically minded, *PAM* uses the following SQL clause to include records that have been created or maintained since the last *PAM* check:

```
WHERE (wlr.expiration_date is null
    or wlr.expiration_date > sysdate)
  and wlr.status = 'ACTIVE'
  and wlr.last_update_date > v_last_check_date
  and wlr.notification_preference not in ( 'QUERY', 'DISABLED')
```

Note: When a record is created both the last_update_date and creation_date are set to the date and time the record was created.

10.1 *PAM* e-mail validation alert – WF_LOCAL_ROLES

When a wf_local_roles record is either created or updated the e-mail address of that record will be validated. If that validation fails *PAM* will generate an alert:

Example *PAM* EV-005 – *PAM* e-mail validation WF_LOCAL_ROLES - alert message

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ALERT MESSAGE FROM *PAM* - PIPER-Rx Application Monitor - DO NOT REPLY

Company = Company Name
Site = APPS 12i
Alert Level = **Informational**
Detected = 23-Nov-11 (Wed) 15:00:05
Alert Frequency = 1 Day

The e-mail address gary%@piper_rx.com for the wf_local_roles role GPIPER failed - invalid character

---

Alert Information:

EV-005 Invalid / banned APPLSYS.WF_LOCAL_ROLES e-mail address detected.

An e-mail address in the **APPLSYS.WF_LOCAL_ROLES** object has been found to have either an invalid format or a banned *PAM* domain.

This alert will be raised if the e-mail address format is invalid or the e-mail address domain is either banned or not in the *PAM* valid domains list.

PAM will validate each **APPLSYS.WF_LOCAL_ROLES** e-mail address whenever the role has been created or maintained.

You can use *PAMreports* - e-mail **PAMEV021 E-mail Validation wf_local_roles** to list any invalid or banned e-mail addresses in the **APPLSYS.WF_LOCAL_ROLES** object.

A list of banned domains can be found using *PAMreports* - e-mail **PAMEV003 Banned e-mail Domains**.

A list of valid domains can be found using *PAMreports* - e-mail **PAMEV001 Valid e-mail Domains**.

10.2 What to do with this information

If you wish to list all invalid e-mail addresses for currently active wf local roles you can use *PAMreports* - e-mail PAMEV021 e-mail Validation wf_local_roles:

Example PAMEV021 e-mail Validation wf_local_roles report

PAMEV021-30	PAM - PIPER-RX - APPLICATION MONITOR E-mail Address Validation - WF_LOCAL_ROLES As at 10-OCT-11 18:11 For SITE NAME NOT SET		PIPER-Rx
E-Mail Address	**Failure Reason**		**Notification Preference**
WF Role Name	**WF Role Display Name**	**Orig System**	**Orig System ID**
ADMIN	**insufficient dots**		MAILHTML
ADMIN	Administrators	WF_LOCAL_ROLES	0
BBSARKAR	**insufficient dots**		MAILHTML
BSARKAR	Sarkar, Bijoy	PER	19147
CGILMART	**insufficient dots**		MAILHTML
CGILMAR	Gilmartin, Colin	PER	513
Administrator Role	**insufficient dots**		MAILHTML
CLN_ADMINISTRATOR	CLN Administrator	WF_LOCAL_USERS	0
SOWENS	**insufficient dots**		MAILHTML
COWENS	Owens, Charlie	PER	8132
tjohnson	**insufficient dots**		MAILHTML
CUSTOMER@STORE	CUSTOMER@STORE	FND_USR	1936

Note: Due to the possibility of a large number of invalid e-mail addresses, this report has been limited to the first 500 invalid e-mail addresses.

10.2.1 Notification Preference

The following is a brief description of the various workflow notification preferences:

MAILTEXT

A plain text message with no attachments.

MAILATTH

A plain text message with two (2) attachments; the first being the HTML formatted version of the message, the second being a link to the message details.

MAILHTML

A HTML format message with a link attachment to the message details.

MAILHTML2

A HTML format message with a no attachments.

SUMMARY

A plain text summary message for all currently open messages.
You are required to access the messages via the applications notifications web page.

QUERY

Do not send any notifications. You are required to access the messages via the applications notifications web page.

DISABLED

This preference is set by Oracle workflow when the user's e-mail address is invalid. Once a user's preference is set to disabled the workflow notification mailer will not send any further e-mail notifications to the user

Note: Records with a notification preference of **QUERY** are excluded from the **PAM** e-mail validation checks

10.3 Turning the WF_LOCAL_ROLES e-mail validation alert off and on

The *PAM* WF_LOCAL_ROLES e-mail validation alert can be turned off using the following *PAM* API:

```
exec PIPER_RX_PAM_API.PAM_ALERT_ENABLE ( 'EV-005', 'N');
```

The alert can be re-enabled using the following *PAM* API:

```
exec PIPER_RX_PAM_API.PAM_ALERT_ENABLE ( 'EV-005', 'Y');
```

11 APPLSYS.WF_LOCAL_USERS

Once per day (default) *PAM* will validate all e-mail addresses for wf_local_users records that have been created or maintained based on the record's last_update_date value since the last *PAM* e-mail validation check.

For the technically minded, *PAM* uses the following SQL clause to include records that have been created or maintained since the last *PAM* check:

```
WHERE (wlu.expiration_date is null
     or wlu.expiration_date > sysdate)
  and wlu.status = 'ACTIVE'
  and wlu.notification_preference not in ( 'QUERY', 'DISABLED')
```

Note: When a record is created both the last_update_date and creation_date are set to the date and time the record was created.

11.1 *PAM* e-mail validation alert – WF_LOCAL_USERS

When a wf_local_users record is either created or updated the e-mail address of that record will be validated. If that validation fails *PAM* will generate an alert:

Example *PAM* EV-006 – *PAM* e-mail validation WF_LOCAL_USERS - alert message

ALERT MESSAGE FROM *PAM* - PIPER-Rx Application Monitor - DO NOT REPLY

Company = Company Name
Site = APPS 12i
Alert Level = **Informational**
Detected = 23-Nov-11 (Wed) 15:00:05
Alert Frequency = 1 Day

The e-mail address gary%@piper_rx.com for the wf_local_users user GPIPER failed - invalid character

Alert Information:

EV-006 Invalid / banned APPLSYS.WF_LOCAL_USERS e-mail address detected.

An e-mail address in the **APPLSYS.WF_LOCAL_USERS** object has been found to have either an invalid format or a banned *PAM* domain.

This alert will be raised if the e-mail address format is invalid or the e-mail address domain is either banned or not in the *PAM* valid domains list.

PAM will validate each **APPLSYS.WF_LOCAL_USERS** e-mail address each *PAM* validation run.

You can use *PAMreports* - e-mail **PAMEV020 E-mail Validation wf_local_users** to list any invalid or banned e-mail addresses in the **APPLSYS.WF_LOCAL_USERS** object.

A list of banned domains can be found using *PAMreports* - e-mail **PAMEV003 Banned e-mail Domains**.

A list of valid domains can be found using *PAMreports* - e-mail **PAMEV001 Valid e-mail Domains**.

11.2 What to do with this information

If you wish to validate all e-mail addresses for currently active workflow local users you can use *PAMreports* - e-mail PAMEV020 e-mail Validation wf_local_users:

Example PAMEV020 e-mail Validation wf_local_users report

PAMEV020-30	PAM - PIPER-RX - APPLICATION MONITOR E-mail Address Validation - WF_LOCAL_USERS As at 10-OCT-11 18:23 For SITE NAME NOT SET			PIPER-Rx
E-Mail Address	**Failure Reason**			**Notification Preference**
WF User Name	**WF User Display Name**		**Orig System**	**Orig System ID**
WFINVALID	**insufficient dots**			MAILHTML
WFADMIN	Workflow Administrator		WF_LOCAL_USERS	0
Invalid E-Mail Accounts: 1				

11.2.1 Notification Preference

The following is a brief description of the various workflow notification preferences:

MAILTEXT

A plain text message with no attachments.

MAILATTH

A plain text message with two (2) attachments; the first being the HTML formatted version of the message, the second being a link to the message details.

MAILHTML

A HTML format message with a link attachment to the message details.

MAILHTML2

A HTML format message with a no attachments.

SUMMARY

A plain text summary message for all currently open messages.
You are required to access the messages via the applications notifications web page.

QUERY

Do not send any notifications. You are required to access the messages via the applications notifications web page.

Note: Records with a notification preference of **QUERY** are excluded from the *PAM* e-mail validation checks.

11.3 Turning the WF_LOCAL_USERS e-mail validation alert off and on

The *PAM* **WF_LOCAL_ROLES** e-mail validation alert can be turned off using the following *PAM* API:

```
exec PIPER_RX_PAM_API.PAM_ALERT_ENABLE ( 'EV-006', 'N');
```

The alert can be re-enabled using the following *PAM* API:

```
exec PIPER_RX_PAM_API.PAM_ALERT_ENABLE ( 'EV-006', 'Y');
```

12 Missing e-mail Addresses

In addition to checking the validity of e-mail address formats *PAM* also checks for missing e-mail addresses in the following objects wf_local_users and wf_local_roles**.**

A missing e-mail address in either of these objects could mean that a notification would never be sent and that workflows may fall through the cracks…

PAM defines a missing e-mail address as an email address of **null** where the notification preference is set to any of the following:

- ❖ MAILTEXT
- ❖ MAILATTH
- ❖ MAILHTML
- ❖ MAILHTML2
- ❖ SUMMARY

12.1 WF_LOCAL_USERS

Once per day (default) *PAM* will check for missing e-mail addresses in the wf_local_users object.

In order to prevent daily alerts for missing e-mail addresses, when an alert is raised, *PAM* will suspend the next check time for a period of 7 days (default).

12.1.1 *PAM* e-mail validation alert – WF_LOCAL_USERS

When one or more a wf_local_users record is found to have a null e-mail address *PAM* will generate an alert:

Example *PAM* EV-007 – *PAM* null e-mail address - alert message

---

ALERT MESSAGE FROM *PAM* - PIPER-Rx Application Monitor - DO NOT REPLY

Company = Company Name
Site = APPS 12i
Alert Level = **Informational**
Detected = 23-Nov-11 (Wed) 15:00:05
Alert Frequency = 1 Day

The workflow table WF_LOCAL_USERS has 1 missing e-mail address.

Alert Information:

EV-007 Null e-mail address in WF_LOCAL_USERS.

PAM has detected one or more null e-mail addresses in the **WF_LOCAL_USERS** object.

When the notification mailer cannot deliver a notification as a result of an invalid e-mail address, it:

- Sets the notification mail status to FAILED
- Changes the notification preference of the recipient to DISABLED.
- Sends a notification to the SYSADMIN (default) user detailing that one or more notifications could not be sent and that the user / role notification preference has been set to DISABLED

Note: The entries in **APPLSYS.WF_LOCAL_USERS** are synchronised via the WF synchronisation concurrent programs with data from various Oracle Applications modules such as applsys.fnd_users, hr.per_all_people_f and ar.ra_contacts etc...

You can use the *PAMreports* - e-mail **PAMEV010 Null e-mail Address wf_local_users** to list all **WF_LOCAL_USERS** records with a null e-mail address.

12.1.2 What to do with this information

You can use *PAMreports* - e-mail PAMEV010 Null e-mail Address wf_local_users to identify users with null e-mail addresses:

Example PAMEV010 Null e-mail Address wf_local_users report

PAMEV010-30	PAM - PIPER-RX - APPLICATION MONITOR E-mail Address Validation - WF_LOCAL_USERS (Null E-mail Address) As at 10-OCT-11 18:39 For SITE NAME NOT SET		PIPER-Rx

WF User Name		Display Name	User Description
Orig System	Orig System ID	Notification Preference Notification Preference Description	
PO_SECONDRY_EMAIL_ADD		PO_SECONDRY_EMAIL_ADD	
WF_LOCAL_USERS	0	MAILHTML HTML mail with attachements	

You can use the attribute "Orig System" to identify the originating system that may have the null e-mail address.

12.1.3 Turning the WF_LOCAL_USERS e-mail validation alert off and on

The *PAM* **WF_LOCAL_USERS** null e-mail validation alert can be turned off using the following *PAM* API:

```
exec PIPER_RX_PAM_API.PAM_ALERT_ENABLE ( 'EV-007', 'N');
```

The alert can be re-enabled using the following *PAM* API:

```
exec PIPER_RX_PAM_API.PAM_ALERT_ENABLE ( 'EV-007', 'Y');
```

12.2 WF_LOCAL_ROLES

Once per day (default) *PAM* will check for missing e-mail addresses in the wf_local_roles object.

In order to prevent daily alerts for missing e-mail addresses, when an alert is raised, *PAM* will suspend the next check time for a period of 7 days (default).

12.2.1 *PAM* e-mail validation alert – WF_LOCAL_ROLES

When one or more a wf_local_roles record is found to have a null e-mail address *PAM* will generate an alert:

Example *PAM* EV-008 – *PAM* null e-mail address - alert message

---

ALERT MESSAGE FROM *PAM* - PIPER-Rx Application Monitor - DO NOT REPLY

Company = Company Name
Site = APPS 12i
Alert Level = **Informational**
Detected = 23-Nov-11 (Wed) 15:00:05
Alert Frequency = 1 Day

The workflow table WF_LOCAL_ROLES has 207 missing e-mail addresses.

Alert Information:

EV-008 Null e-mail address in WF_LOCAL_ROLES.

PAM has detected one or more null e-mail addresses in the **WF_LOCAL_ROLES** object.

When the notification mailer cannot deliver a notification as a result of an invalid e-mail address, it:

- Sets the notification mail status to FAILED
- Changes the notification preference of the recipient to DISABLED.
- Sends a notification to the SYSADMIN (default) user detailing that one or more notifications could not be sent and that the user / role notification preference has been set to DISABLED

Note: The entries in **APPLSYS.WF_LOCAL_ROLES** are synchronised via the WF synchronisation concurrent programs with data from various Oracle Applications modules such as applsys.fnd_users, hr.per_all_people_f and ar.ra_contacts etc...

You can use *PAMreports* - e-mail **PAMEV011 Null e-mail Address wf_local_roles** to list all **WF_LOCAL_ROLES** records with a null e-mail address.

12.2.2 What to do with this information

You can use *PAMreports* - e-mail PAMEV011 Null e-mail Address wf_local_users to list all **WF_LOCAL_ROLES** records with a null e-mail address:

Example PAMEV011 Null e-mail Address wf_local_roles report

PAMEV011-30	PAM - PIPER-RX - APPLICATION MONITOR E-mail Address Validation - WF_LOCAL_ROLES (Null E-mail Address) As at 10-OCT-11 18:42 For SITE NAME NOT SET			PIPER-Rx
WF Role Name		**Display Name**	**Role Description**	
Orig System	**Orig System ID**	**Notification Preference**	**Notification Preference Description**	
381-12247-INSTALLMENT		381-12247-INSTALLMENT		
WF_LOCAL_ROLES	0	MAILHTML	HTML mail with attachements	
ADHOC24544213853499697PA		Star Gate Ltd		
WF_LOCAL_ROLES	0	MAILHTML	HTML mail with attachements	
AML_20546_1		AML_20546_1		
WF_LOCAL_ROLES	0	MAILHTML	HTML mail with attachements	
AML_22846_1		AML_22846_1		
WF_LOCAL_ROLES	0	MAILHTML	HTML mail with attachements	
AML_22861_1		AML_22861_1		
WF_LOCAL_ROLES	0	MAILHTML	HTML mail with attachements	
AML_22862_1		AML_22862_1		
WF_LOCAL_ROLES	0	MAILHTML	HTML mail with attachements	

Note: Due to the possibility of a large number of invalid e-mail addresses, this report has been limited to the first 500 invalid e-mail addresses.

You can use the attribute "Orig System" to identify the originating system that may have the null e-mail address.

12.2.3 Turning the WF_LOCAL_ROLES e-mail validation alert off and on

The *PAM* **WF_LOCAL_ROLES** null e-mail validation alert can be turned off using the following *PAM* API:

```
exec PIPER_RX_PAM_API.PAM_ALERT_ENABLE ( 'EV-008', 'N');
```

The alert can be re-enabled using the following *PAM* API:

```
exec PIPER_RX_PAM_API.PAM_ALERT_ENABLE ( 'EV-008', 'Y');
```

13 Disabled Notification Preferences - WF_LOCAL_USERS

Once per day (default) *PAM* will check for notification preferences in the wf_local_users object that have been set to DISABLED.

When the notification mailer cannot deliver a notification as a result of the e-mail address being invalid, it:

- ❖ Sets the notification mail status to **FAILED**
- ❖ Adds the e-mail address to its own invalid e-mail address list. On any subsequent request to send a notification to an address recorded in the notification mailers invalid address list, the notification mailer sets the mail status to **FAILED** <u>without attempting to send the notification</u>.
- ❖ Changes the notification preference of the recipient to **DISABLED**.
- ❖ Sends a notification to the SYSADMIN (default) user detailing that one or more notifications could not be sent and that the offending users notification preference has been set to **DISABLED**

13.1 *PAM* notification preference check – WF_LOCAL_USERS

When one or more a wf_local_users record is found to have a disabled notification preference *PAM* will generate the following alert:

Example *PAM* EV-010 – *PAM* disabled notification preference - alert message

---

ALERT MESSAGE FROM *PAM* - PIPER-Rx Application Monitor - DO NOT REPLY

Company = Company Name
Site = APPS 12i
Alert Level = **Informational**
Detected = 23-Nov-11 (Wed) 15:00:05
Alert Frequency = 1 Day

---

3 notification preference have been found to be DISABLED in WF_LOCAL_USERS

Alert Information:

EV-010 Disabled Notification Preferences - WF_LOCAL_USERS.

PAM has determined that one or more notification preferences have been disabled in the **APPLSYS.WF_LOCAL_USERS** object.

When the notification mailer cannot deliver a notification as a result of an invalid e-mail address, it:

- Sets the notification mail status to FAILED
- Changes the notification preference of the recipient to DISABLED.
- Sends a notification to the SYSADMIN (default) user detailing that one or more notifications could not be sent and that the user / role notification preference has been set to DISABLED

You can use *PAMreports* - e-mail **PAMEV040 Disabled preferences wf_local_users** to list the entries in the **APPLSYS.WF_LOCAL_USERS** object whos notification preferences have been set to DISABLED.

Note: The entries in **APPLSYS.WF_LOCAL_USERS** are synchronised via the WF synchronisation concurrent programs with data from various Oracle Applications sources such as applsys.fnd_users, hr.per_all_people_f and ar.ra_contacts etc

When a notification has been raised for a given user, a notification will not be raised again for that user for a grace period of **X** days (default 5). This is designed to provide sufficient time to correct the underlying issue.

13.1.1 Changing the number of grace days

The number of grace days can be changed using the following *PAM* API:

```
exec piper_rx_pam_ev_monitor.pam_ev_disabled_grace_days ( 5 );
```

Parameter 1: The number of grace days

13.2 What to do with this information

You can use the *PAM* e-mail validation report PAMEV040 Disabled preferences wf_local_users to list all the wf_local_users with a notification preference of disabled:

Example PAMEV040 Disabled preferences wf_local_users report

PAMEV040-30	PAM - PIPER-RX - APPLICATION MONITOR Disabled Notification Preferences - WF_LOCAL_USERS As at 06-DEC-11 17:16 For APPS 12i				PIPER-Rx
User Name	Display	Orig System	Notification Pref	E-Mail Address	
	No disabled preferences found				

You can use the attribute "Orig System" to identify the originating system that may have the invalid e-mail address.

Once the invalid e-mail address issue has been corrected <u>at the application module level</u>, remembering the *wf_local_roles* and *wf_local_roles* tables are synchronised.

You will then need to reset the user's notification preference. Once this is done you can run the concurrent program ***Resend Failed/Error Workflow Notifications*** to resend workflow notifications that could not be sent.

13.3 Turning the WF_LOCAL_USERS disabled notification preference alert off and on

The *PAM* **WF_LOCAL_USERS** disabled notification preference alert can be turned off using the following *PAM* API:

```
exec PIPER_RX_PAM_API.PAM_ALERT_ENABLE ( 'EV-008', 'N');
```

The alert can be re-enabled using the following *PAM* API:

```
exec PIPER_RX_PAM_API.PAM_ALERT_ENABLE ( 'EV-008', 'Y');
```

13.4 *PAM* notification preference check – WF_LOCAL_ROLES

When one or more a wf_local_roles record is found to have a disabled notification preference *PAM* will generate the following alert:

Example *PAM* EV-011 – *PAM* disabled notification preference - alert message

---

ALERT MESSAGE FROM *PAM* - PIPER-Rx Application Monitor - DO NOT REPLY

Company = Company Name
Site = APPS 12i
Alert Level = **Informational**
Detected = 23-Nov-11 (Wed) 15:00:05
Alert Frequency = 1 Day

---

3 notification preference have been found to be DISABLED in WF_LOCAL_ROLES

Alert Information:

EV-011 Disabled Notification Preferences - WF_LOCAL_ROLES.

PAM has determined that one or more notification preferences have been disabled in the

---

APPLSYS.WF_LOCAL_ROLES object.

When the notification mailer cannot deliver a notification as a result of an invalid e-mail address, it:

- Sets the notification mail status to FAILED
- Changes the notification preference of the recipient to DISABLED.
- Sends a notification to the SYSADMIN (default) user detailing that one or more notifications could not be sent and that the user / role notification preference has been set to DISABLED

You can use the *PAM* e-mail validation report **PAMEV041 Disabled preferences wf_local_roles** to list the entries in the **APPLSYS.WF_LOCAL_ROLES** object whose notification preferences have been set to DISABLED.

Note: The entries in **APPLSYS.WF_LOCAL_ROLES** are synchronised via the WF synchronisation concurrent programs with data from various Oracle Applications sources such as applsys.fnd_users, hr.per_all_people_f and ar.ra_contacts etc.

When a notification has been raised for a given role, a notification will not be raised again for that role for a grace period of *X* days (default 5). This is designed to provide sufficient time to correct the underlying issue.

13.4.1 Changing the number of grace days

The number of grace days can be changed using the following *PAM* API:

```
exec piper_rx_pam_ev_monitor.pam_ev_disabled_grace_days ( 6 );
```

Parameter 1: The number of grace days

13.5 What to do with this information

You can use the *PAM* e-mail validation report PAMEV041 Disabled preferences wf_local_roles to list all the wf_local_roles with a notification preference of disabled:

Example PAMEV041 Disabled preferences wf_local_roles report

PAMEV041-30	PAM - PIPER-RX - APPLICATION MONITOR Disabled Notification Preferences - WF_LOCAL_ROLES As at 06-DEC-11 17:09 For APPS 12i			PIPER-Rx
Role Name	**Display**	**Orig System**	**Notification Pref**	**E-Mail Address**
STYSON	Tyson, Steve	PER	DISABLED	STYSON

You can use the attribute "Orig System" to identify the originating system that may have the invalid e-mail address.

Once the invalid e-mail address issue has been corrected <u>at the application module level</u>, remembering the wf_local_roles and wf_local_roles tables are synchronised.

You will then need to reset the user's notification preference. Once this is done you can run the concurrent program *Resend Failed/Error Workflow Notifications* to resend workflow notifications that could not be sent.

13.6 Turning the WF_LOCAL_ROLES disabled notification preference alert off and on

The *PAM* **WF_LOCAL_ROLES** disabled notification preference alert can be turned off using the following *PAM* API:

```
exec PIPER_RX_PAM_API.PAM_ALERT_ENABLE ( 'EV-008', 'N');
```

The alert can be re-enabled using the following *PAM* API:

```
exec PIPER_RX_PAM_API.PAM_ALERT_ENABLE ( 'EV-008', 'Y');
```

14 Failed Notification

Once per hour (default) *PAM* will check for 'OPEN' notifications that have a mail status of 'FAILED'. This indicates that a notification mailer has tried to send a notification to an invalid e-mail address.

When the notification mailer cannot deliver a notification as a result of the e-mail address being invalid, it:

- ❖ Sets the notification mail status to **FAILED**
- ❖ Adds the e-mail address to its own invalid e-mail address list. On any subsequent request to send a notification to an address recorded in the notification mailers invalid address list, the notification mailer sets the mail status to **FAILED** <u>without attempting to send the notification</u>.
- ❖ Changes the notification preference of the recipient to **DISABLED**.
- ❖ Sends a notification to the SYSADMIN (default) user detailing that one or more notifications could not be sent and that the offending users notification preference has been set to **DISABLED**

14.1 *PAM* failed notifications check

Every hour (default) *PAM* will check if there are any failed notifications that have been generated since the last *PAM* check.

When one or more a failed workflow notifications are found *PAM* will generate the following alert:

Example *PAM* EV-012 – *PAM* failed notifications - alert message

---

ALERT MESSAGE FROM *PAM* - PIPER-Rx Application Monitor - DO NOT REPLY

Company = Company Name
Site = APPS 12i
Alert Level = **Informational**
Detected = 23-Nov-11 (Wed) 15:00:05
Alert Frequency = 1 Hour

---

2 workflow notifications have been detected as FAILED since 23-Nov-11 14:00

Alert Information:

EV-012 Notifications with a Mail Status of Failed.

PAM has identified that one or more workflow notifications have FAILED due to an invalid e-mail address.

When the notification mailer cannot deliver a notification as a result of an invalid e-mail address, it:

- Sets the notification mail status to FAILED
- Changes the notification preference of the recipient to DISABLED.
- Sends a notification to the SYSADMIN (default) user detailing that one or more notifications could not be sent and that the user / role notification preference has been set to DISABLED

You can use *PAMreports* - e-mail **PAMEV050 Failed Notifications** to list notifications that have failed since a given date.

14.2 What to do with this information

You can use *PAMreports* - e-mail PAMEV050 Failed Notifications to list all notifications that have failed since a specified date. Generally you should use the date provided by the *PAM* alert to show all new failed notifications.

Example PAMEV050 Failed Notifications report


```
PAMEV050-30                         PAM - PIPER-RX - APPLICATION MONITOR                          PIPER-Rx
                                            Failed Notifications
                                 For Notifications Raised After 01-JAN-01 13:50
                                            As at 06-DEC-11 17:03
                                               For APPS 12i

Notification Id:        3201921   Notification Date:      14-Feb-07 10:43
Recipient Role      JLATTERS@VISIONNL.COM                          Original Recipient:   JLATTERS@VISIONNL.COM
From User:          SYSADMIN                                       To User:   Latters , Jos
Msg Type:               OTWF  Msg Name:      OTA_LRNR_TEST_RESULT_MSG
Subject:            Test Management Test successfully submitted

Notification Id:        3201919   Notification Date:      14-Feb-07 10:38
Recipient Role      EJANSEN@VISIONNL.COM                           Original Recipient:   EJANSEN@VISIONNL.COM
From User:          SYSADMIN                                       To User:   Jansen , Edith
Msg Type:               OTWF  Msg Name:      OTA_LRNR_TEST_RESULT_MSG
Subject:            Test Management Test successfully submitted

Notification Id:        3199758   Notification Date:      13-Feb-07 11:27
Recipient Role      VASHIROVA@VISIONRU.COM                         Original Recipient:   VASHIROVA@VISIONRU.COM
From User:          SYSADMIN                                       To User:   Ashirova , Vera
Msg Type:               OTWF  Msg Name:      OTA_LRNR_TEST_RESULT_MSG
Subject:            Test Management Test successfully submitted
```

Whilst this report will give you the extent of the current issue (i.e. number of notifications that failed), you should run both the PAMEV040 Disabled preferences wf_local_users and PAMEV041 Disabled preferences wf_local_roles reports to identify the workflow user or role

with the notification preference of disabled. Then using the ORIG SYSTEM attribute trace the invalid email address back to the base application source and correct it in that location.

15 Fixing the issue

Once the invalid e-mail address issue has been corrected <u>at the application module level</u>, remembering the wf_local_roles and wf_local_roles will need to be synchronised, you will then need to reset the user's notification preference. Once this is done you can run the concurrent program ***Resend Failed/Error Workflow Notifications*** to resend workflow notifications that could not be sent.

Example Screen Shot
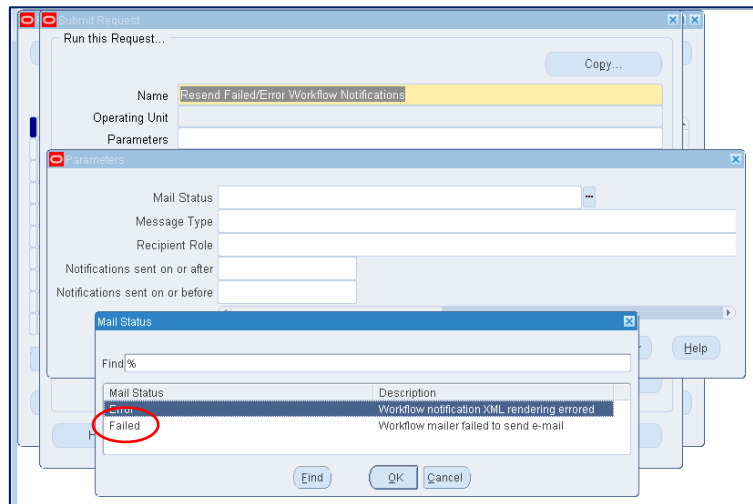
Note: The number of parameters are OEBS version dependant

Of course as always, you will have tested this process first

16 Notification Preferences (MAILTYPE)

It is often beneficial when tracking down why e-mail alerts are not being received to review the workflows notification preferences.

You can use **PAMreports** - e-mail PAMEV060 User preferences (MAILTYPE) to view the current workflow notification preferences:

Example **PAMEV060 User preferences (MAILTYPE)** report

PAMEV060-30	PAM - PIPER-RX - APPLICATION MONITOR		PIPER-Rx
	User preferences (MAILTYPE)		
	As at 27-FEB-12 14:09		
	For APPS 12i		
User Name	Description	E-Mail Address	Preference
-WF_DEFAULT-			MAILHTML
AALAMOUDI@VISIONSA.COM		nobody@localhost	MAILHTML
AAMBROS	Mr. Anthony Ambrose, Finance Director		QUERY
ABOROS@VISIONHU.COM		nobody@localhost	MAILHTML
ABOTFA@VISIONHU.COM		nobody@localhost	MAILHTML
ACARNES@YAHOO.INC		nobody@localhost	MAILHTML
ACARTER@YAHOO.INC			MAILHTML
ACHURCH@YAHOO.INC		nobody@localhost	MAILHTML
ACONNER@YAHOO.INC		nobody@localhost	MAILHTML
ADVANCED_UK	ADVANCED_UK	nobody@localhost	MAILHTML
AGREEN	Alice Green		QUERY
AHAMILTON	Anne Hamilton, Vision Services	nobody@localhost	QUERY

The following is a list of workflow notification preferences.

MAILTEXT
>   The notification message appears as plain text, with no attachments.

MAILHTML
>   The notification message appears as HTML-formatted text, with one or more links to the notification in the workflow notification details web page.

MAILHTM2
>   The notification message appears as HTML-formatted text, but does not include links.

MAILATTH
>   The notification message appears as plain text, with at least two standard attachments. One attachment is an HTML-formatted version of the message, and the other is a link to the notification in the workflow notification details web page.

SUMMARY
>   The message is a plain text summary of all open notifications. To respond to the individual notifications in the summary, you must access the notifications from the workflow worklist web page.

PAM - Piper-Rx Application Monitor

SUMHTML

> The message is an HTML-formatted summary of all open notifications, with a link to the workflow worklist web page as well as links to each notification in the workflow notification details web page.

QUERY

> The notification mailers do not send e-mail notifications. The user must query and respond to your notifications from the workflow worklist web page.

DISABLED

> Set automatically at the user preference level for a user with an invalid e-mail address.

17 *PAM* e-mail address validation exceptions

PAM provides three (3) additional e-mail validation check exceptions:

- ❖ *PAM* Excluded e-mail addresses
- ❖ *PAM* Banned Domains
- ❖ *PAM* Valid Domains

17.1 PAM Excluded e-mail addresses

PAM provides the ability to add known valid e-mail addresses that would normally fail the *PAM* e-mail address validation process. Any e-mail address or string added will be assumed to be correct and will be excluded from the *PAM* e-mail validation check

Know valid e-mail address can be added to the *PAM* known valid e-mail address using the following *PAM* API:

```
exec PIPER_RX_PAM_EV_MONITOR.pam_ev_ex_add_record ('gary@piper-rx.com', 'Y', 'E', 'Comment Goes here');
```

Parameter 1

> The e-mail address to be excluded from the *PAM* e-mail validation process

Parameter 2

> 'Y' = The email address is to be excluded from the *PAM* e-mail validation process, 'N' = the email address will be suspended and thus included in the *PAM* e-mail validation process until the address is either removed from the exceptions list or the check status is set to 'Y'

Parameter 3

The type of exception:

- ❖ B = Banned
- ❖ V = Valid Domain
- ❖ E = Exclude e-mail address

Parameter 4 (Optional)

> Free format description of the address to be excluded

17.1.1 Listing excluded e-mail addresses

You can use *PAMreports* - e-mail PAMEV002 Excluded e-mail Addresses report to list known valid e-mail addresses to be excluded from the *PAM* e-mail validation process:

Example **PAMEV002 Excluded e-mail Addresses** report

PAMEV002-30	PAM - PIPER-RX - APPLICATION MONITOR E-mail Address Validation - Excluded Addresses As at 10-OCT-11 19:44 For SITE NAME NOT SET	PIPER-Rx

Excluded E-mail	Check Status	Comments
nobody@localhost	Enabled	Example Only

17.2 PAM banned address

There may be occasions where your site does not allow e-mails to be sent to public e-mail domains such as hotmail etc…

PAM provides the ability to detect specific e-mail domains that are "banned" from your site. This is achieved by adding "banned" domains to the **PAM** banned domains list.

17.2.1 Listing banned e-mail domains

You can use **PAMreports** - e-mail PAMEV003 Banned e-mail Domains report to list **PAM** banned e-mail.

Example **PAMEV003 Banned e-mail domains** report

PAMEV003-30	PAM - PIPER-RX - APPLICATION MONITOR E-mail Address Validation - Banned Domains As at 10-OCT-11 19:01 For SITE NAME NOT SET	PIPER-Rx

Banned Domain Name	Check Status	Comments
123adult.com	Enabled	Nown SPAM site
crushnet.com	Enabled	Nown SPAM site
facebookmail	Enabled	Generic e-mail domain
gmail	Enabled	Generic e-mail domain
googlemail	Enabled	Generic e-mail domain
hotmail	Enabled	Generic e-mail domain
luckymail	Enabled	Generic e-mail domain
xxx	Enabled	Adult Content Domain
y7mail	Enabled	Generic e-mail domain
yahoo	Enabled	Generic e-mail domain

If the banned domain name is yahoo, then all domains that start with yahoo will be marked as banned yahoo.com yahoo.com.au etc…

Entering the value yahoo.com will only ban yahoo.com but allow yahoo.ca etc…

17.3 Valid Domains Check

PAM checks each e-mail domain against the *PAM* valid domains list.

Not only does this feature allow you to pick up domains that are not in your valid list, more importantly it allows you to pick possible incorrect spelling issues. i.e abc.con

Example **PAMEV001 Valid e-mail Domains** report

PAMEV001-30	PAM - PIPER-RX - APPLICATION MONITOR	PIPER-Rx
	E-mail Address Validation - Valid Domains	
	As at 10-OCT-11 19:08	
	For SITE NAME NOT SET	

Domain Name	Check Status
.co.nz	Enabled
.co.uk	Enabled
.com	Enabled
.com.au	Enabled
.edu	Enabled
.edu.au	Enabled
.gov	Enabled
.gov.au	Enabled
.mil	Enabled
.net	Enabled
.net.au	Enabled
.org	Enabled
.org.au	Enabled

17.4 Turing off the *PAM* domain checks

The three (3) additional *PAM* domain checks:

- ❖ *PAM* Excluded e-mail addresses
- ❖ *PAM* Banned Domains
- ❖ *PAM* Valid Domains

as a group can be turned on or off. The following *PAM* API can be used to turn on the additional *PAM* domain checks:

```
exec piper_rx_pam_ev_monitor.pam_ev_domain_checks_set ( 'Y' );
```

The following *PAM* API can be used to turn off the additional *PAM* domain checks:

```
exec piper_rx_pam_ev_monitor.pam_ev_domain_checks_set ( 'N' );
```

Note: When the additional *PAM* domain checks are turned off, the message *"Excludes PAM domain exceptions checks"* will appear on the bottom of *PAMreports* -e-mail validation reports that list all e-mail addresses that failed the *PAM* validation checks.

When the *PAM* domain checks are turned off, a message will appear on each of the following reports to clearly identify the checks are not included in the e-mail validation monitor, as shown in the example below.

17.5 *PAM* Domain Exceptions Maintenance

17.5.1 Adding a Domain Exception

The *PAM* e-mail validation module provides a number of APIs for managing domain exceptions.

```
exec PIPER_RX_PAM_EV_MONITOR.pam_ev_ex_add_record ('PIPER-RX', 'Y', 'B', 'Comment Goes here');
```

Parameter 1:

> The domain

Parameter 2:

> The check status for the domain, 'Y' include the domain in *PAM* check, 'N' exclude the domain from *PAM* check.

Parameter 3:

> The domain check type, **B** = Banned, **V** = Valid Domain, **E** = Exclude e-mail address.

Parameter 4:

> Free format Comment, the entered comment will be truncated to a length of 60.

Examples:

Adding a banned domain:

```
exec piper_rx_pam_ev_monitor.pam_ev_ex_add_record ('abcdef.com', 'Y', 'B', 'Banned Domain');
```

Add a valid domain:

```
exec piper_rx_pam_ev_monitor.pam_ev_ex_add_record ('abcdef.com', 'Y', 'V', 'Banned Domain');
```

Add an e-mail address to be excluded from the PAM validation check:

```
exec piper_rx_pam_ev_monitor.pam_ev_ex_add_record ('abcdef.com', 'Y', 'E', 'Banned Domain');
```

17.5.2 Removing a Domain Exception

A *PAM* domain exception entry can be removed using the following *PAM* API.

```
exec piper_rx_pam_ev_monitor.pam_ev_ex_del_record ('PIPER-RX');
```

17.5.3 Suspending a Domain Exception

A *PAM* domain exception can be suspended from the *PAM* additional validation checks using the following *PAM* API.

```
exec PIPER_RX_PAM_EV_MONITOR.pam_ev_ex_update_chk_status    ('PIPER-RX', 'Y');
```

Parameter 1:

> The domain name

Parameter 2:

> The domain status, 'Y' = Include in the *PAM* additional domain checks, 'N' = Exclude from *PAM* additional domain checks.

PAM - Piper-Rx Application Monitor

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