

# myASn Overview

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New Projects

Internal RIPE NCC, April 2004

# Motivation for myASn

- Current RIS usage
  - ASinuse, Prefixinuse: RS
  - Looking Glass: Operators
  - Raw Data: Researchers
- Find an application that brings the value of an activity such as the RIS to LIRs
  - **Key:** LIR Portal Integration
  - Entry point to the 'RIS Box of Tricks'
  - Will be available to rest of the Community in some form
- Naturally, also framework for future 'Plug-Ins':
  - Internet weather (indexes based on packet loss, delay, routing stability etc)
  - Visibility
  - Routing churn

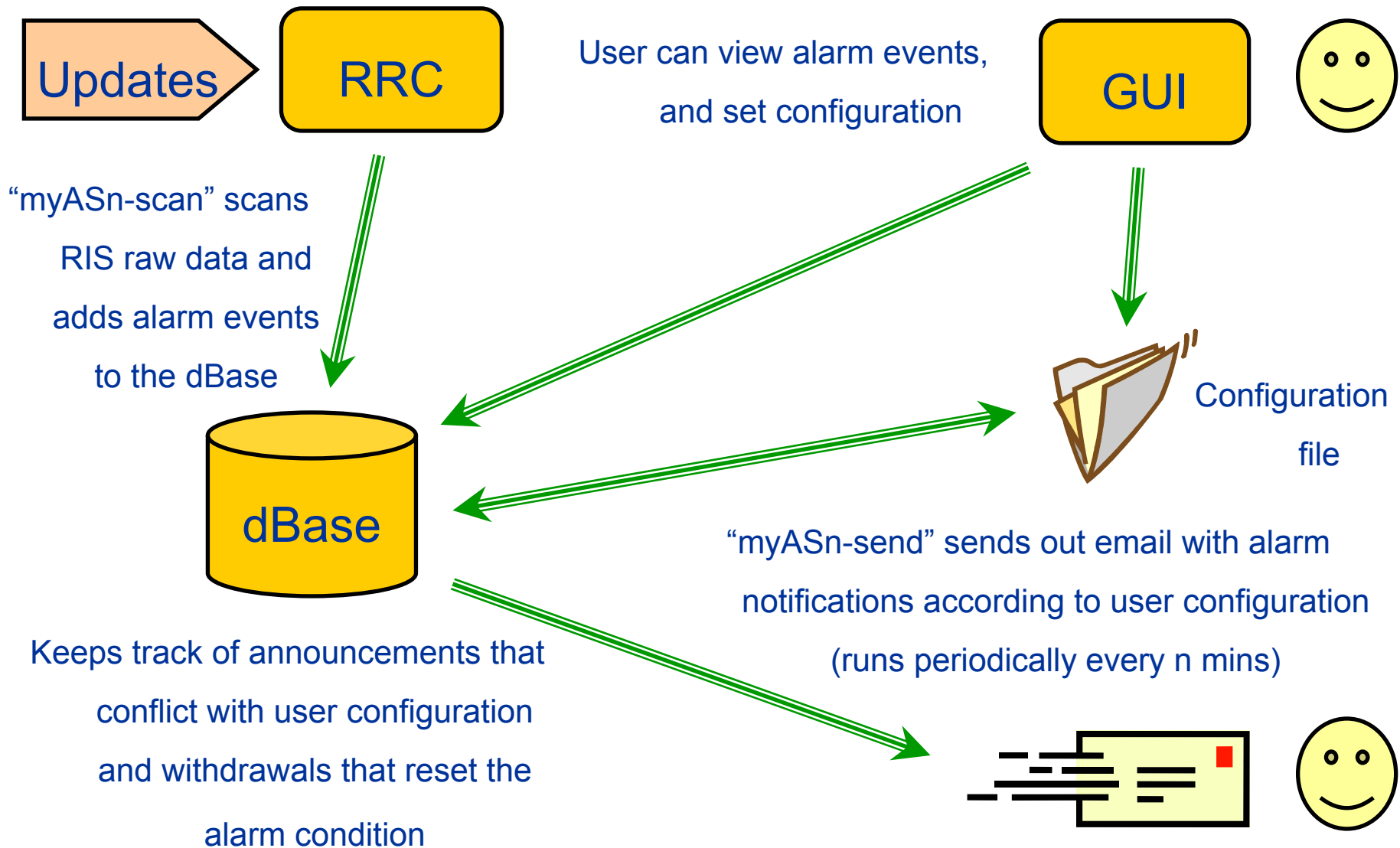
# Concepts: myASn

- Notification system for BGP which can generate alerts in cases of unexpected routing behavior
- Integrated into the LIR Portal
- ***Main functions:***
  - Monitors BGP route propagation of user-specified IP address ranges and ASNs throughout the entire RIS
  - Generates alarm events when routing information conflicts with myASn user configuration
  - Sends alarm notifications to email accounts
- Normally one has to go to the RIS and look for one's data, now the RIS will come to you...

# Concepts: myASn (cont.)

- **Three Basic Alarm Types:**
  1. **Origin Alarm**
    - *Am I the only AS announcing prefixes in my allocated IP address space?*
  2. **Transit Provider Alarm**
    - *Are my routes being announced over expected transit providers?*
  3. **Customer Alarm**
    - *Are my single- and multi-homed customers' routes being announced with myself as the expected transit provider?*
- If the answer to one of the above questions is "NO" then myASn detects an **alarm event** which can depending on user settings trigger an alarm notification
- Alarm events and notifications are "peer-based"
- The notifications are summarised into a single email every n minutes to limit the amount of emails sent

# The myASn Principle



# Integration into the LIR Portal

LIR Portal - My ASN - New Alarm - uk.bt.matthew - Netscape

File Edit View Go Bookmarks Tools Window Help

http://sofly:33080/lirportal/liruser/myasn/newalarm.html Search

**LIR Portal**  
**Ripe NCC**

**New Alarm**  
You are logged in as [uk.bt.matthew]

[Home](#) » - [My ASN](#) » - New Alarm

**Logout**  
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**News**  
**Events**  
**Glossary**  
**Contact**

Alarm type:  Alarm group:

My AS number(s):  Their AS number(s):

Prefix:  Other upstreams:

Prefix exceptions:  Hold down time:

Hold down event:

Time to live:

Expected ASpath:

# LIR Portal Integration (cont.)

LIR Portal - My ASN - Alarm Log - uk.bt.matthew - Netscape

File Edit View Go Bookmarks Tools Window Help

http://sofly:33080/lirportal/liruser/myasn/view\_alarmlog.html Search

**LIR Portal**  
**Ripe NCC**

**Alarm Log**  
You are logged in as [uk.bt.matthew]

Home » - My ASN » - Alarm Log

Showing  alarms in  group.  | [Manage alarm groups...](#)

| ID                  | Group | Prefix            | Type   | RegEX        | HDT | HDE | TTL | State | Events | Details              | Clear                 |
|---------------------|-------|-------------------|--------|--------------|-----|-----|-----|-------|--------|----------------------|-----------------------|
| <a href="#">332</a> | Test  | + 195.80.224.0/24 | origin | My AS# 55555 | 1h  | 5   | 4h  | A     | 398    | <a href="#">view</a> | <a href="#">clear</a> |
| <a href="#">331</a> | Test  | + 195.80.232.0/24 | origin | My AS# 55555 | 1h  | 5   | 2h  | A     | 21     | <a href="#">view</a> | <a href="#">clear</a> |
| <a href="#">330</a> | Test  | + 195.80.231.0/24 | origin | My AS# 55555 | 1h  | 5   | 2h  | A     | 338    | <a href="#">view</a> | <a href="#">clear</a> |
| <a href="#">328</a> | Test  | + 195.80.229.0/24 | origin | My AS# 55555 | 1h  | 5   | 2h  | A     | 480    | <a href="#">view</a> | <a href="#">clear</a> |
| <a href="#">327</a> | Test  | + 195.80.228.0/24 | origin | My AS# 55555 | 1h  | 5   | 2h  | A     | 141    | <a href="#">view</a> | <a href="#">clear</a> |
| <a href="#">326</a> | Test  | + 195.80.227.0/24 | origin | My AS# 55555 | 1h  | 5   | 2h  | A     | 524    | <a href="#">view</a> | <a href="#">clear</a> |
| <a href="#">325</a> | Test  | + 195.80.226.0/24 | origin | My AS# 55555 | 1h  | 5   | 2h  | A     | 57     | <a href="#">view</a> | <a href="#">clear</a> |
| <a href="#">324</a> | Test  | + 195.80.225.0/24 | origin | My AS# 55555 | 1h  | 5   | 2h  | A     | 428    | <a href="#">view</a> | <a href="#">clear</a> |

Logout  
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News  
Events  
Glossary  
Contact



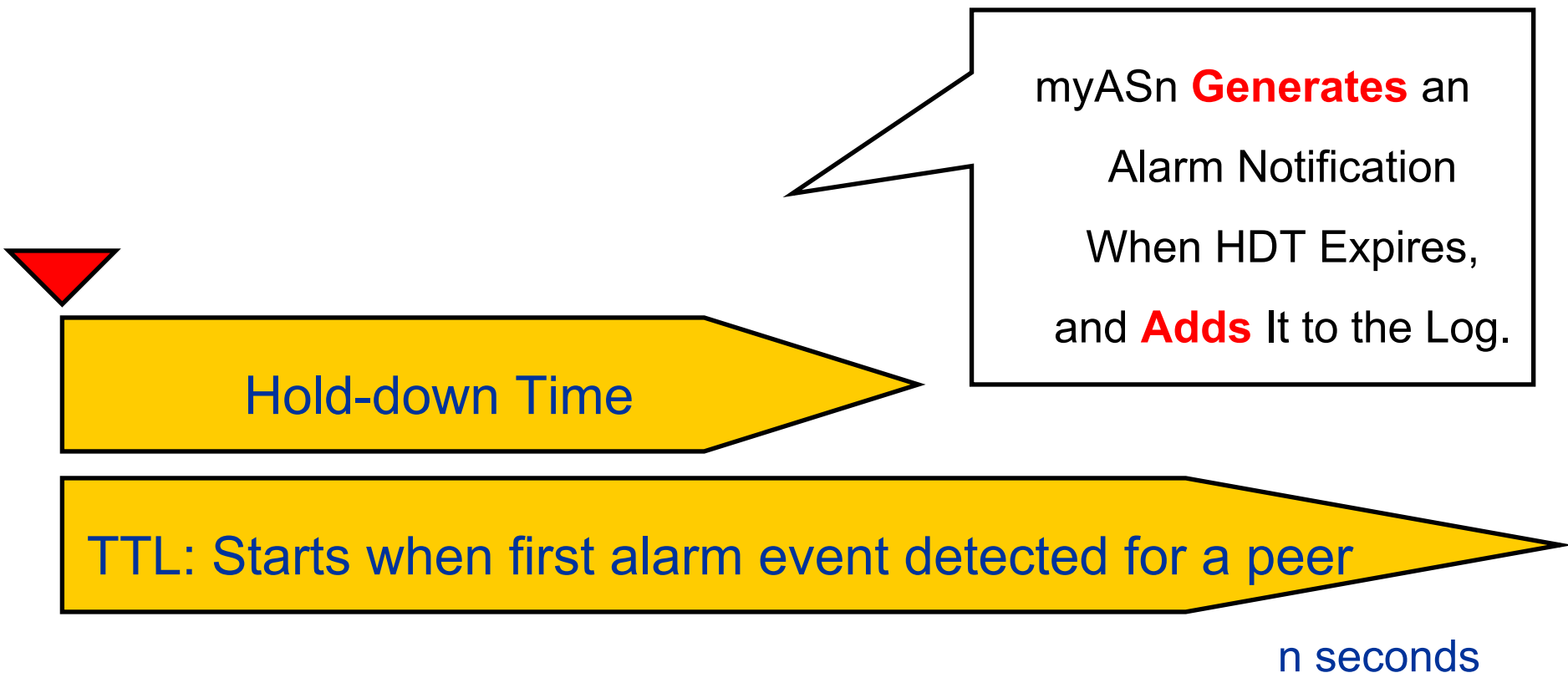
# Configuration Settings

- ***Hold-down Time (HDT)***
  - Time to wait after alarm event occurrence before generating an alarm notification
- ***Hold-down Event (HDE)***
  - Amount of alarm event occurrences allowed before generating an alarm notification
- Whatever happens ***first*** triggers the notification
- Remember to **differentiate** between the alarm notifications from the different peers that are triggered by alarm events, and the email summary that lists all alarm notifications from all RIS peers every n minutes
- ***Time to Live (TTL)***
  - Amount of time to elapse before deleting all event occurrences and restarting the detection process again



# Settings: **Scenario One**

- myASn detects that peer A.B.C.D has sent a BGP announcement that conflicts with user's settings

A diagram illustrating the alarm generation process. A red triangle points down to a yellow arrow labeled "Hold-down Time". Below this is a longer yellow arrow labeled "TTL: Starts when first alarm event detected for a peer". A speech bubble points to the "Hold-down Time" arrow with the text: "myASn **Generates** an Alarm Notification When HDT Expires, and **Adds** It to the Log." The text "n seconds" is positioned at the end of the "TTL" arrow.

myASn **Generates** an  
Alarm Notification  
When HDT Expires,  
and **Adds** It to the Log.

Hold-down Time

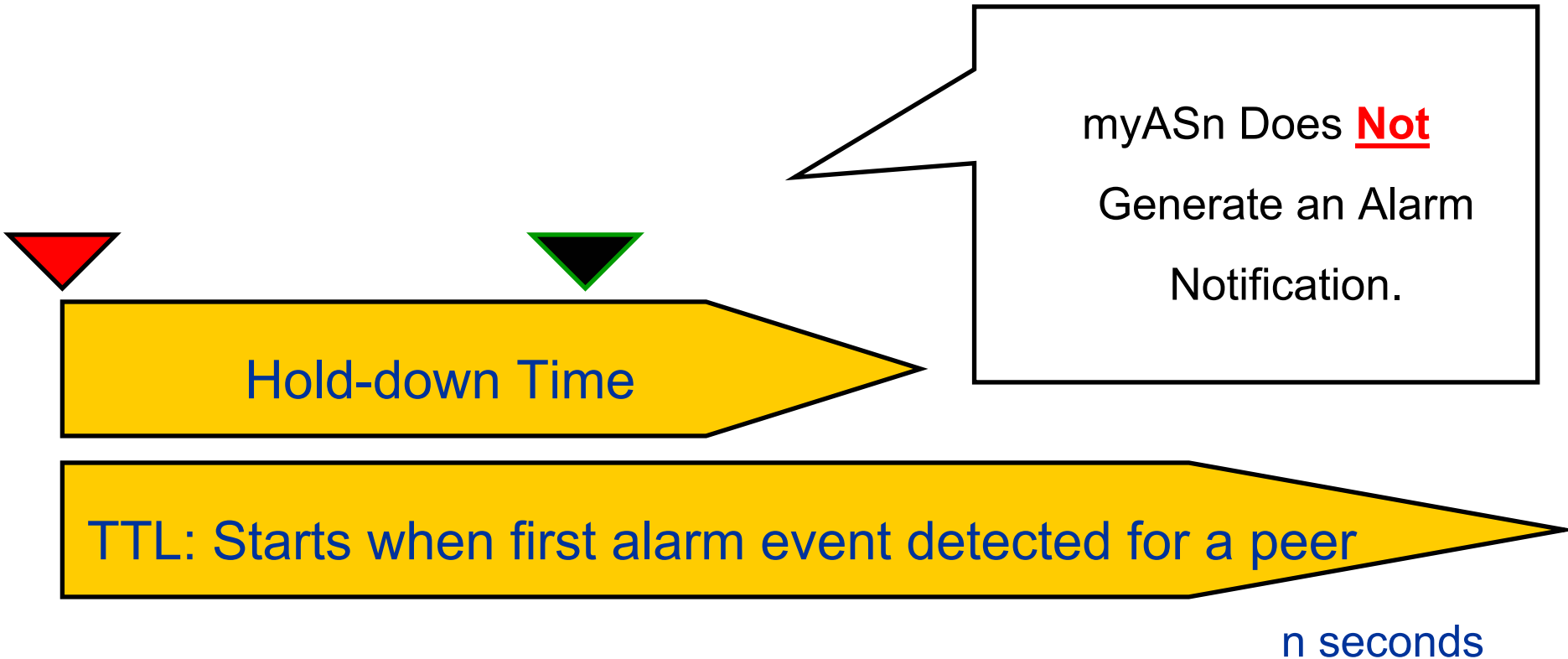
TTL: Starts when first alarm event detected for a peer

n seconds

- Defaults: HDT: 1Hrs, HDE: 5 events, TTL: 4Hrs

# Settings: Scenario Two

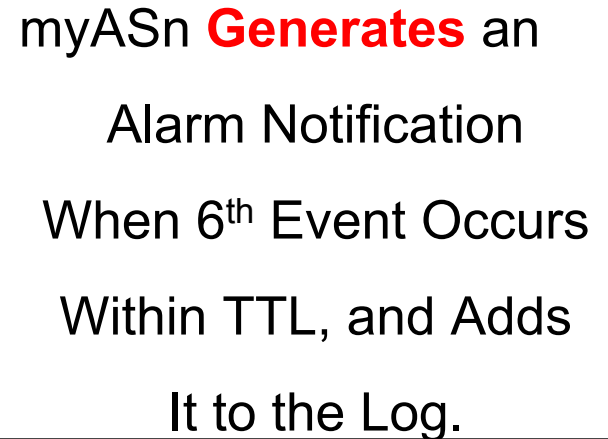
- myASn detects that peer A.B.C.D has sent a BGP announcement that conflicts with user's settings followed by a withdrawal within HDT



- Defaults: HDT: 1Hrs, HDE: 5 events, TTL: 4Hrs

# Settings: Scenario Three

- myASn detects that peer A.B.C.D has sent several BGP announcements that conflict with user's settings

A speech bubble with a black border and a tail pointing towards the left. It contains text about an alarm notification.

myASn **Generates** an  
Alarm Notification  
When 6<sup>th</sup> Event Occurs  
Within TTL, and Adds  
It to the Log.

A large yellow arrow pointing to the right, containing text about the TTL setting.

TTL: Starts when first alarm event detected for a peer

n seconds

- Defaults: HDT: 1Hrs, HDE: 5 events, TTL: 4Hrs

# Email Accounts per Alarm Group

LIR Portal - My ASN - Manage Alarm Groups - uk.bt.matthew - Netscape

File Edit View Go Bookmarks Tools Window Help

http://softy:33080/lirportal/liruser/myasn/manage\_alarmgroups.htm Search

**LIR Portal**  
**Ripe NCC**

**Manage Alarm Groups**  
You are logged in as [uk.bt.matthew]

Home » My ASN » Manage Alarm Groups

**Existing alarm groups:**

| ID | Name    | Email            | Syslog IP |  |
|----|---------|------------------|-----------|--|
| 1  | Default |                  |           | Update<br><a href="#">disable notifications</a>   <a href="#">delete</a> |
| 2  | Legacy  |                  |           | Update<br><a href="#">disable notifications</a>   <a href="#">delete</a> |
| 4  | Test    | matthew@ripe.net |           | Update<br><a href="#">disable notifications</a>   <a href="#">delete</a> |
| 3  | Kraut   | dknight@ripe.net |           | Update<br><a href="#">disable notifications</a>   <a href="#">delete</a> |

**Create a new alarm group:**

new

**Alternatively, send all notificatoins to:**

[disable notifications](#)

**Logout**  
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**Contact**

**Ripe NCC**

RIPE



# Alarm Message

Date: Thu, 1 Apr 2004 09:00:55 GMT  
Message-Id: <200404010900.i3190tB4002791@diemen.ripe.net>  
From: MyASN Notifications <myasn@ripe.net>  
To: alexis@ripe.net  
Subject: New alarms for uk.bt

Dear My ASN contact,

New alarms were detected for uk.bt. Please find the details below. Only up to 50 events per alarm are displayed. Please use the web interface for further details.

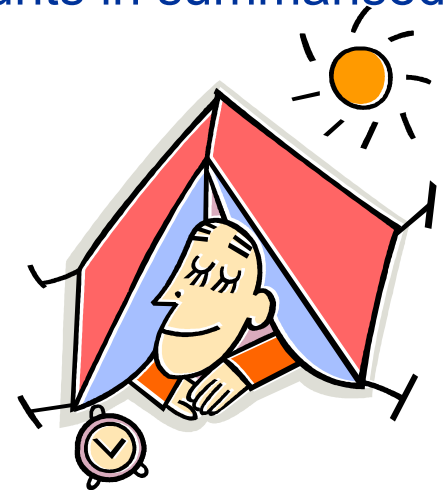
-- MyASN System

Origin alarm 19 (Default), 195.80.224.0/24 (exceptions not shown), MyASN: 55555, HDT: 3600, HDE: 5, TTL: 14400

| RRC Count | Prefix          | AS Path         | Peer           | UTC First                | UTC Last                 |
|-----------|-----------------|-----------------|----------------|--------------------------|--------------------------|
| rrc006    | 195.80.224.0/24 | 3549 7018 12654 | 64.211.147.146 | Thu Apr 1 06:00:02 2004  | Thu Jan 22 00:00:31 2004 |
| rrc006    | 195.80.224.0/24 | 3549 1239 13129 | 64.211.147.146 | Thu Jan 22 00:00:33 2004 | Thu Jan 22 00:22:55 2004 |
| rrc006    | 195.80.224.0/24 | 3549 2914 12654 | 64.211.147.146 | Thu Jan 22 00:23:55 2004 | Thu Jan 22 00:24:04 2004 |
| rrc006    | 195.80.224.0/24 | 3549 7018 12654 | 64.211.147.146 | Thu Jan 22 00:49:52 2004 | Thu Jan 22 02:00:02 2004 |
| rrc006    | 195.80.224.0/24 | 3549 7018 12654 | 64.211.147.146 | Thu Jan 22 02:00:03 2004 | Thu Jan 22 04:26:15 2004 |
| rrc006    | 195.80.224.0/24 | 3549 1239 13129 | 64.211.147.146 | Thu Jan 22 04:26:15 2004 | Thu Jan 22 06:00:02 2004 |
| rrc006    | 195.80.224.0/24 | 3549 1239 13129 | 64.211.147.146 | Thu Jan 22 06:00:57 2004 | Thu Jan 22 10:00:02 2004 |
| rrc006    | 195.80.224.0/24 | 3549 1239 13129 | 64.211.147.146 | Thu Jan 22 10:00:50 2004 | Thu Jan 22 14:01:04 2004 |
| rrc006    | 195.80.224.0/24 | 3549 1239 13129 | 64.211.147.146 | Thu Jan 22 14:01:10 2004 | Thu Jan 22 18:00:05 2004 |
| rrc006    | 195.80.224.0/24 | 2914 7018 12654 | 129.250.0.232  | Thu Apr 1 06:01:04 2004  | Thu Jan 22 00:00:35 2004 |
| rrc006    | 195.80.224.0/24 | 2914 7018 12654 | 129.250.0.232  | Thu Jan 22 00:00:53 2004 | Thu Jan 22 02:00:01 2004 |
| rrc006    | 195.80.224.0/24 | 2914 1239 13129 | 129.250.0.232  | Thu Jan 22 02:00:37 2004 | Thu Jan 22 02:00:59 2004 |
| rrc006    | 195.80.224.0/24 | 2914 7018 12654 | 129.250.0.232  | Thu Jan 22 02:01:00 2004 | Thu Jan 22 06:00:01 2004 |

# Summary

- **myASn Concept**
  - **Notification system** for BGP that can generate alerts in cases of unexpected routing behaviour
  - **LIR Integration**
  - **Alarms Types:** Origin, Transit Provider, Customer
- **GUI**
  - **Configuration:** Hold-down Time, Hold-down Event, Time To Live
  - **Alarm Events vs Alarm Notifications:** Depending on user configuration, alarm events trigger alarm notifications that are logged by myASn and then sent to email accounts in summarised form
- **Test User Programme**
  - Around 200 users so far
  - Mailing List: [myasntesting@ripe.net](mailto:myasntesting@ripe.net)
  - Prototype: <http://www.ris.ripe.net/myasn>



# Questions, Discussion

