



**AfrinIC**



**AfrinIC-9**

22 - 28 Nov 08

**Mauritius**



# Resource Services Report



*Spearheading Internet technology and policy development in the African Region*

## Resource Services

---

- ▶ Sometimes called “Registration Services”
  - Ernest
  - Radha
  - ‘Observers’
  
  - Core function:
    - Management and distribution of number resources (IPv4, IPv6, ASN)
    - Assist new/Prospective Members – process/procedure
    - Support for core function
      - Whois DB, MyAfrinIC, reverse dns

## Contents – Mainly Stats

---

- ▶ IPv4 Address Space
- ▶ IPv6 Address Space
- ▶ AS Numbers
- ▶ Membership Statistics
- ▶ Request Statistics

# IPv4 Address Space

---

Current Pool (Please see):

<http://www.iana.org/assignments/ipv4-address-space/ipv4-address-space.txt>

- ▶ **041/8 AfrinIC**                      **2005-04 whois.afrinic.net**    **ALLOCATED**
- ▶ **197/8 AfrinIC**                      **2008-10 whois.afrinic.net**    **ALLOCATED**
- ▶ **196/8 Administered by AfrinIC** **1993-05 whois.afrinic.net**    **LEGACY**
- ▶ **154/8 Administered by AfrinIC** **1993-05 whois.afrinic.net**    **LEGACY \***

- \* + Revised IANA IPv4 address registry
  - + Consequent (legacy) address space redistribution
  - + AfrinIC given “administrative” authority of 154/8

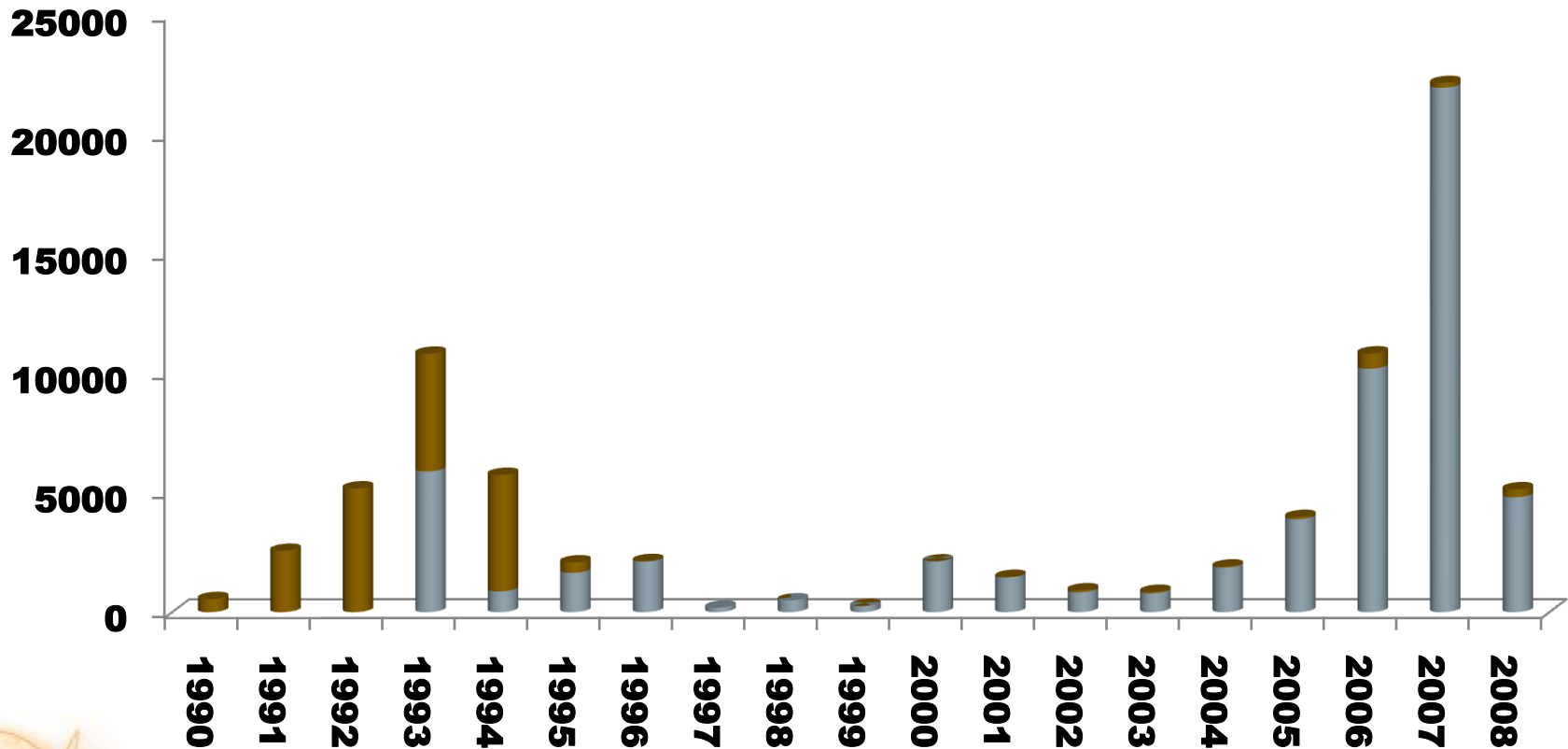


## IPv4 Address Space

---

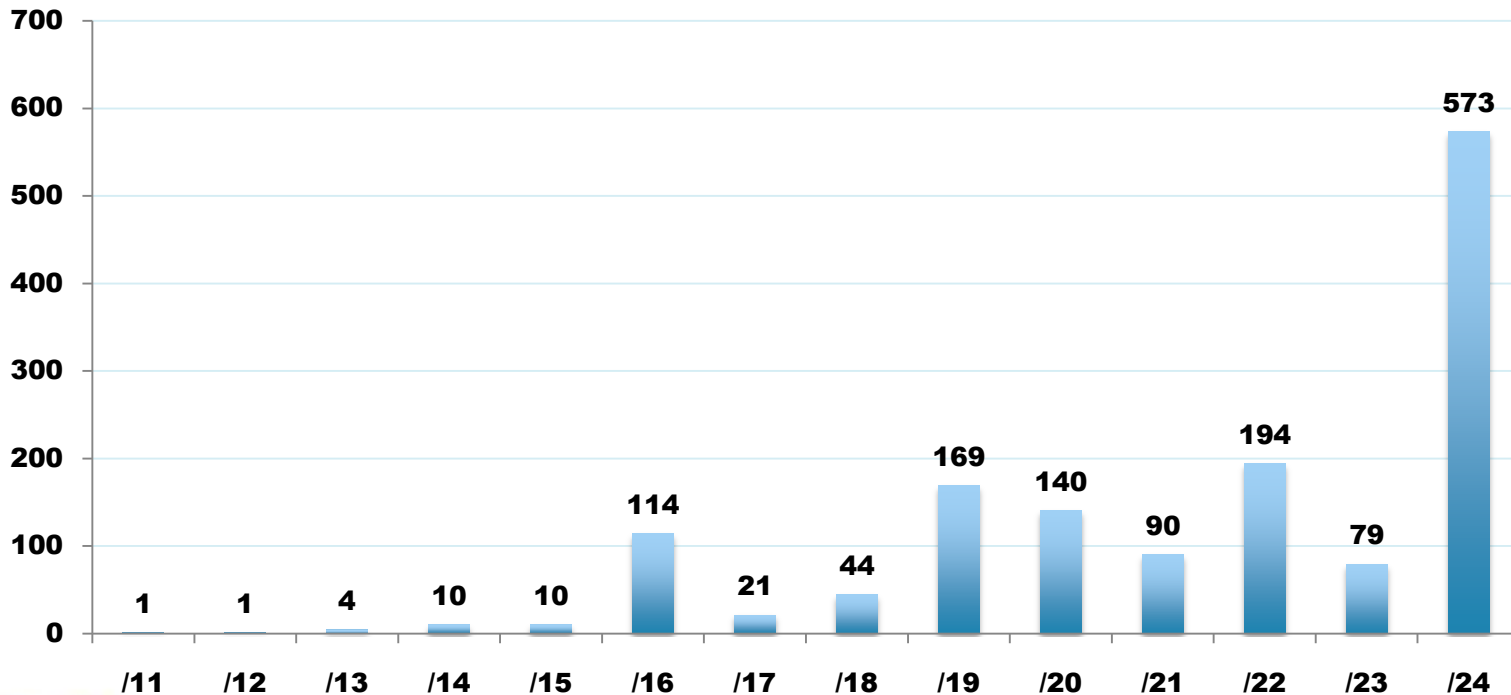
- ▶ Addresses issued to-date: 20,582,656 (or 1.23 /8s)
- ▶ PI/EU/Direct Assignments: 5,336,064 (~ 26%)
- ▶ ISP/LIR Allocations: 15,246,592 (~ 74%)
- ▶ Addresses issued after 2003: 11,499,008 (~ 56%)

## IPv4 Address Space



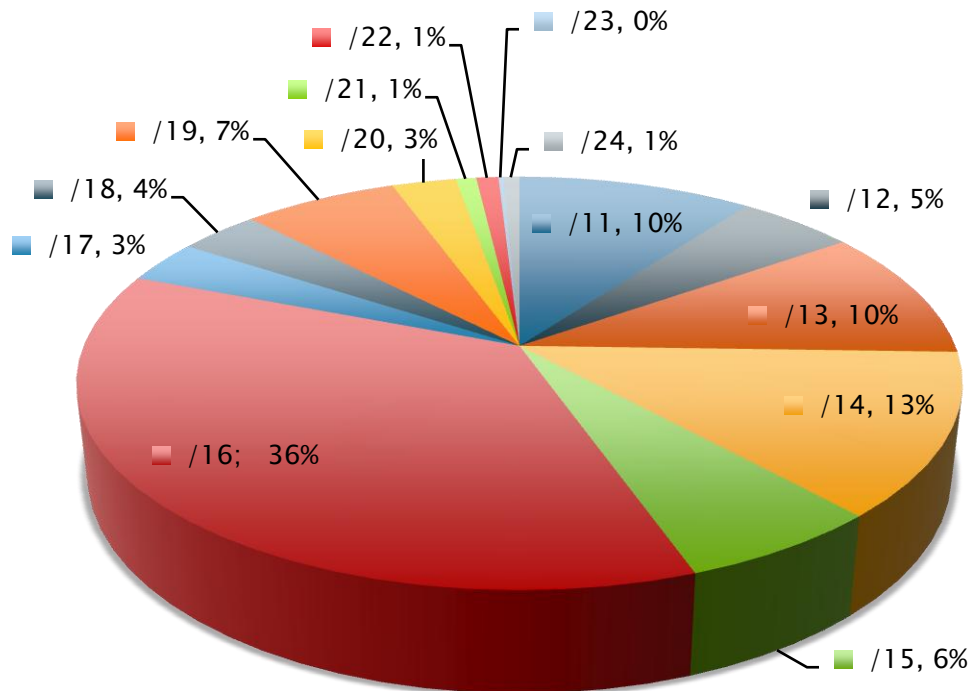
# IPv4 Address Space

### Addresses issued by prefix length



# IPv4 Address Space

### Distribution by Prefix Length

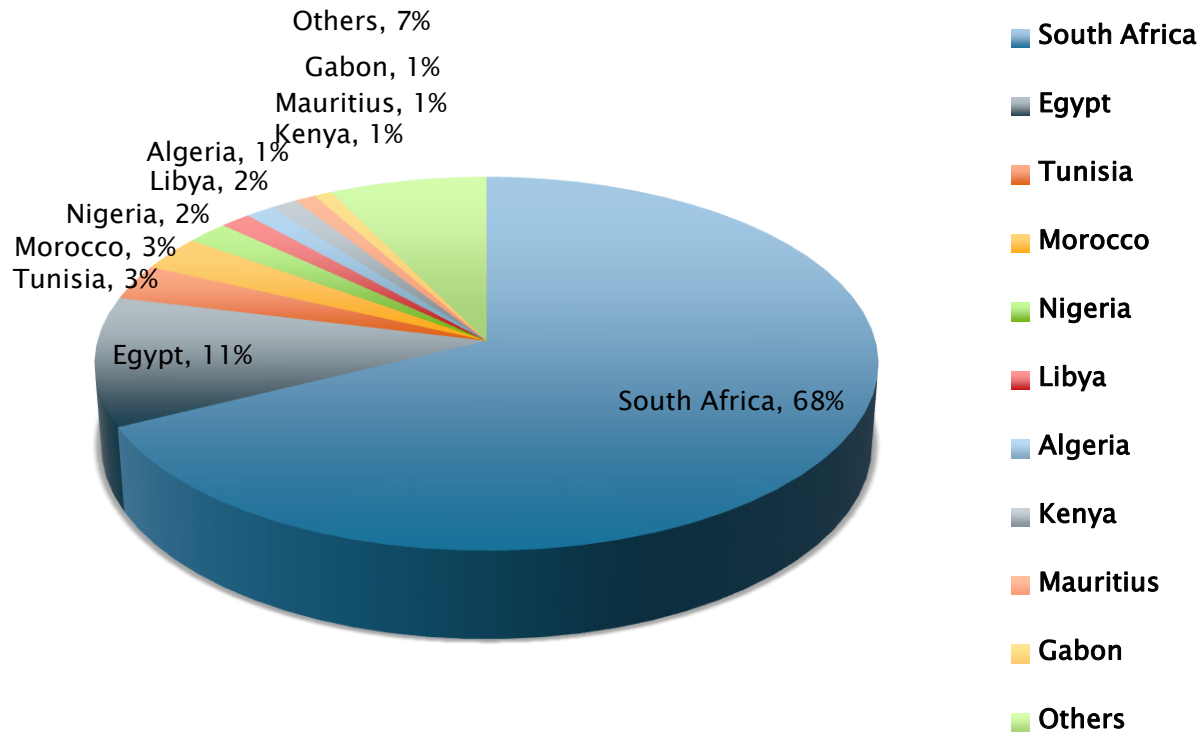


■ /11 ■ /12 ■ /13 ■ /14 ■ /15 ■ /16 ■ /17 ■ /18 ■ /19 ■ /20 ■ /21 ■ /22 ■ /23 ■ /24



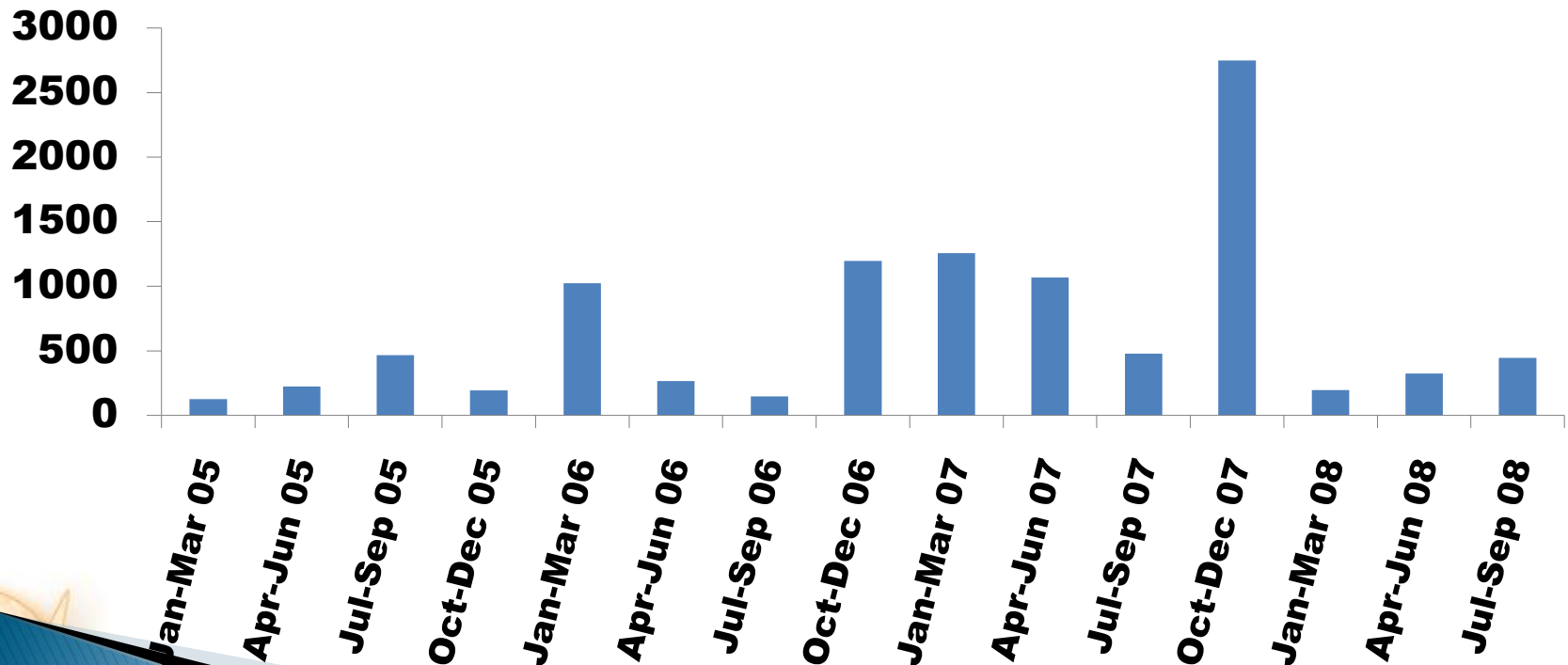
# IPv4 Address Space

## Address distribution – Top 10 countries



# IPv4 Address Space

IPv4 addresses issued by Quarter (x1024)



## IPv4 Address Space

---

- ▶ Space issued to Critical Infrastructure:
  - Includes Internet Exchange Points, RIRs and root server operators (refer to policy)
  - IXPs: 7
  - Root Server operators: 2

## IPv6 Address Space

---

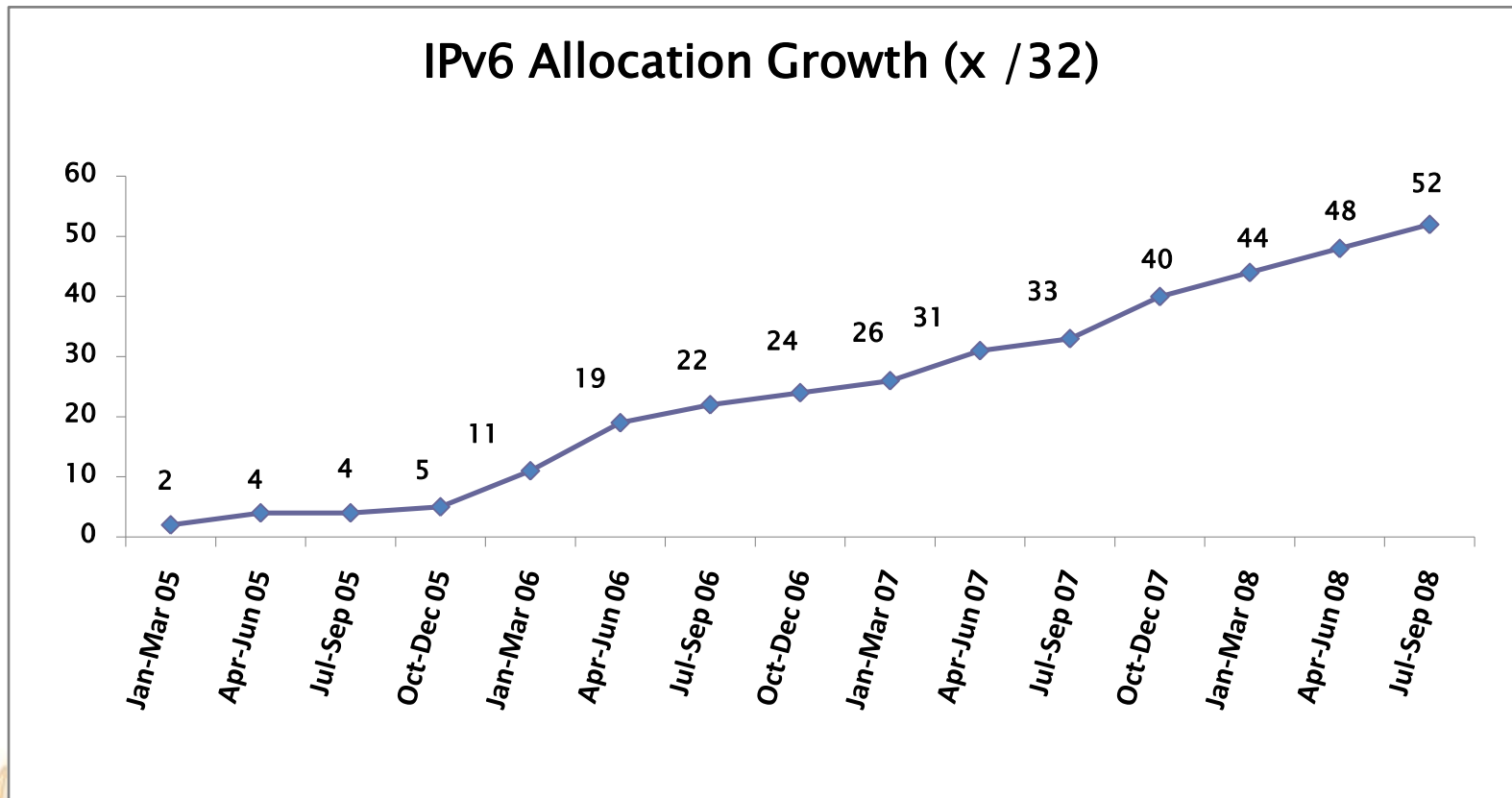
Current Pool (Please see):

<http://www.iana.org/assignments/ipv6-unicast-address-assignments>

- ▶ **2c00:0000::/12**      **AfrinIC 03-Oct-2006**
- ▶ **2001:4200::/23**      **AfrinIC 01-Jun-2004**

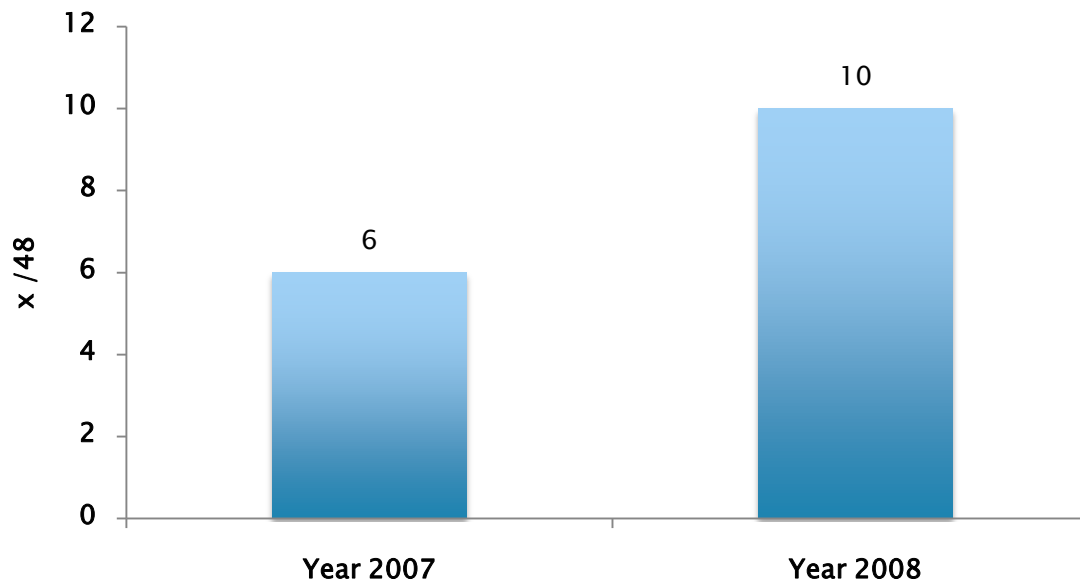


# IPv6 Address Space



# IPv6 Address Space

IPv6 PI/EU/Direct Assignment  
Growth



## IPv6 Address Space

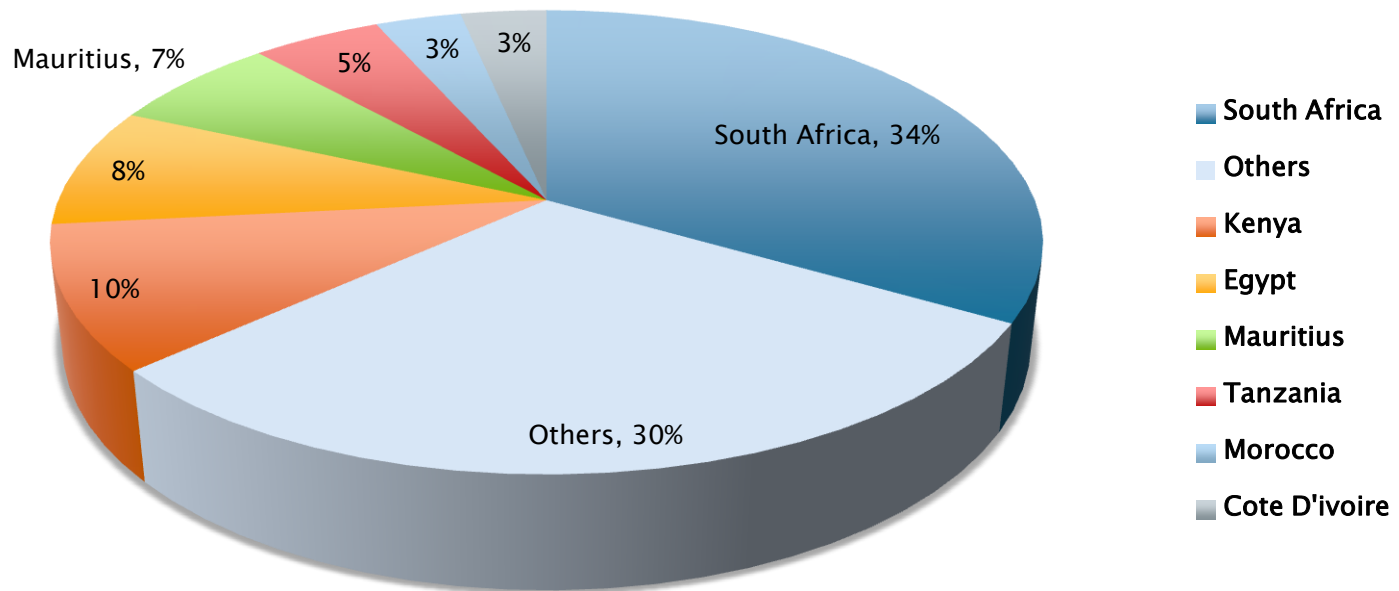
---

▶ *Deployment Status?*

- ▶ IPv6 'prefixes' issued: 60
- ▶ IPv6 'prefixes' visible: 20
  - Announced: ZA: 8, MU: 4, EG: 3, and others.
  - *Policy requires deployment within 12 months of receiving v6 address space.*

# IPv6 Address Space

### Address Distribution by Country





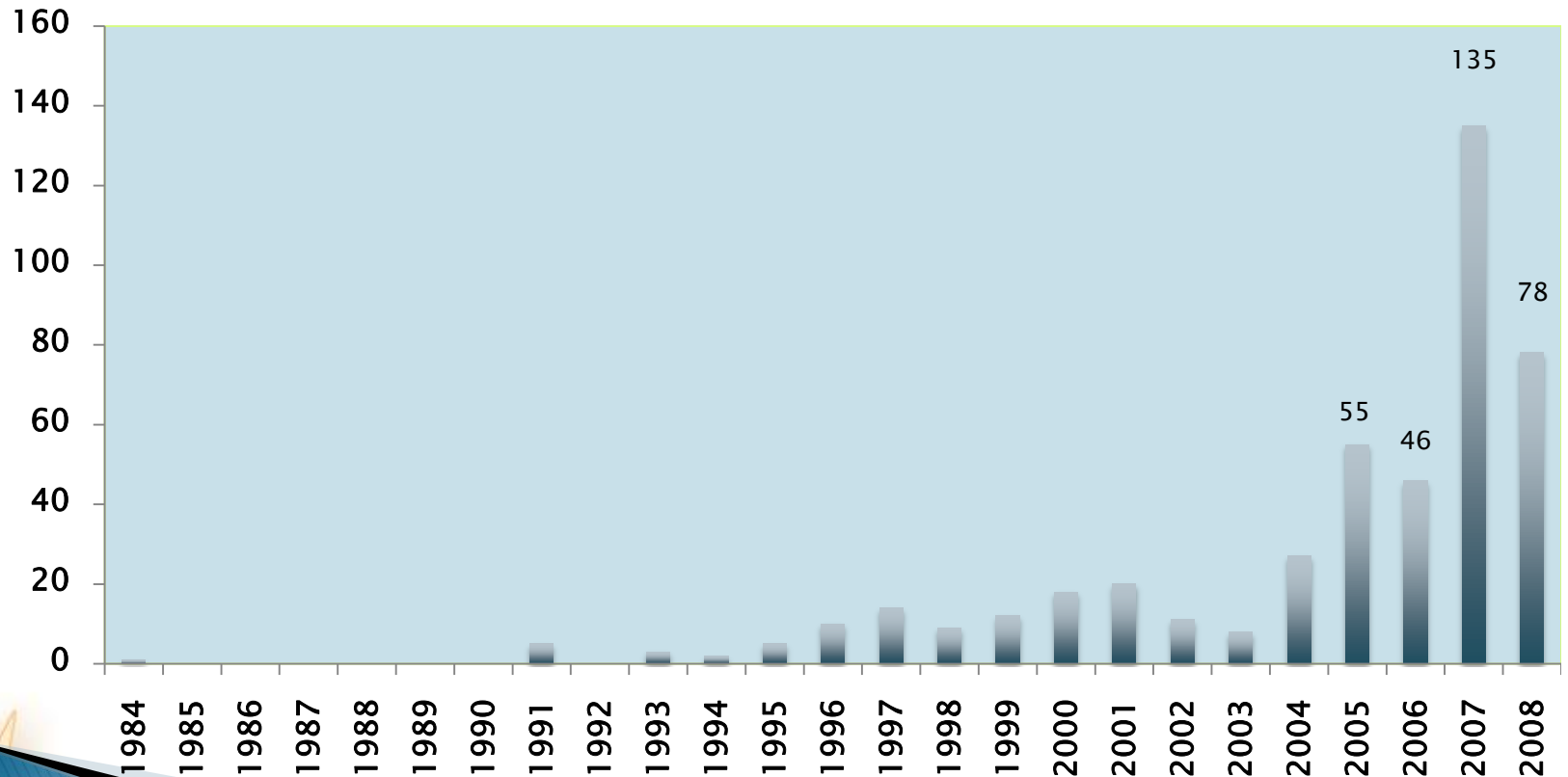
# IPv6 Address Space

---

- ▶ Critical Infrastructure:
  - IXPs: 1 (KE)

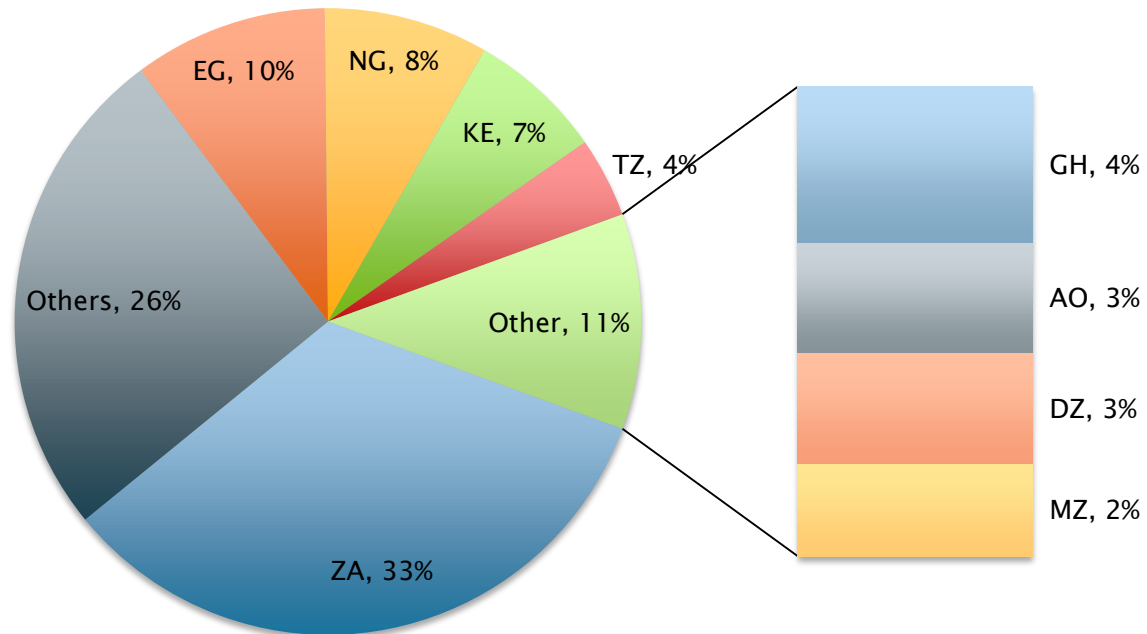
# AS Numbers

### AS Numbers Assigned



# AS Numbers

### ASN Distribution by Country



■ ZA ■ Others ■ EG ■ NG ■ KE ■ TZ ■ GH ■ AO ■ DZ ■ MZ

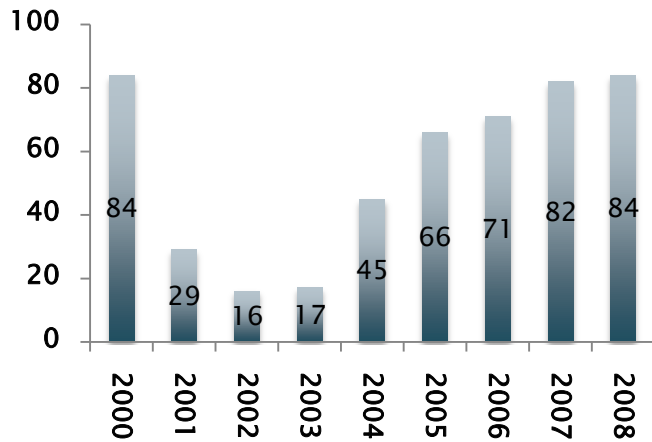
## AS Numbers

- ▶ 4-byte AS Numbers:
  - 2-byte AS numbers running out
  - IETF -> expand the range to 4-byte -> 4bn ASes
  - 4-byte ASN Policy ,
    - adopted
      - AfrinIC to start issuing 4-byte ASNs from Jan09
- + As of today, only 5 4-byte ASN issued since May 07 (after policy implementation)
- + 4-byte ASN representation still an issue:  
<http://tools.ietf.org/id/draft-ietf-idr-as-representation-01.txt> status?  
(*'asplain'* vs *'asdot'* representation)

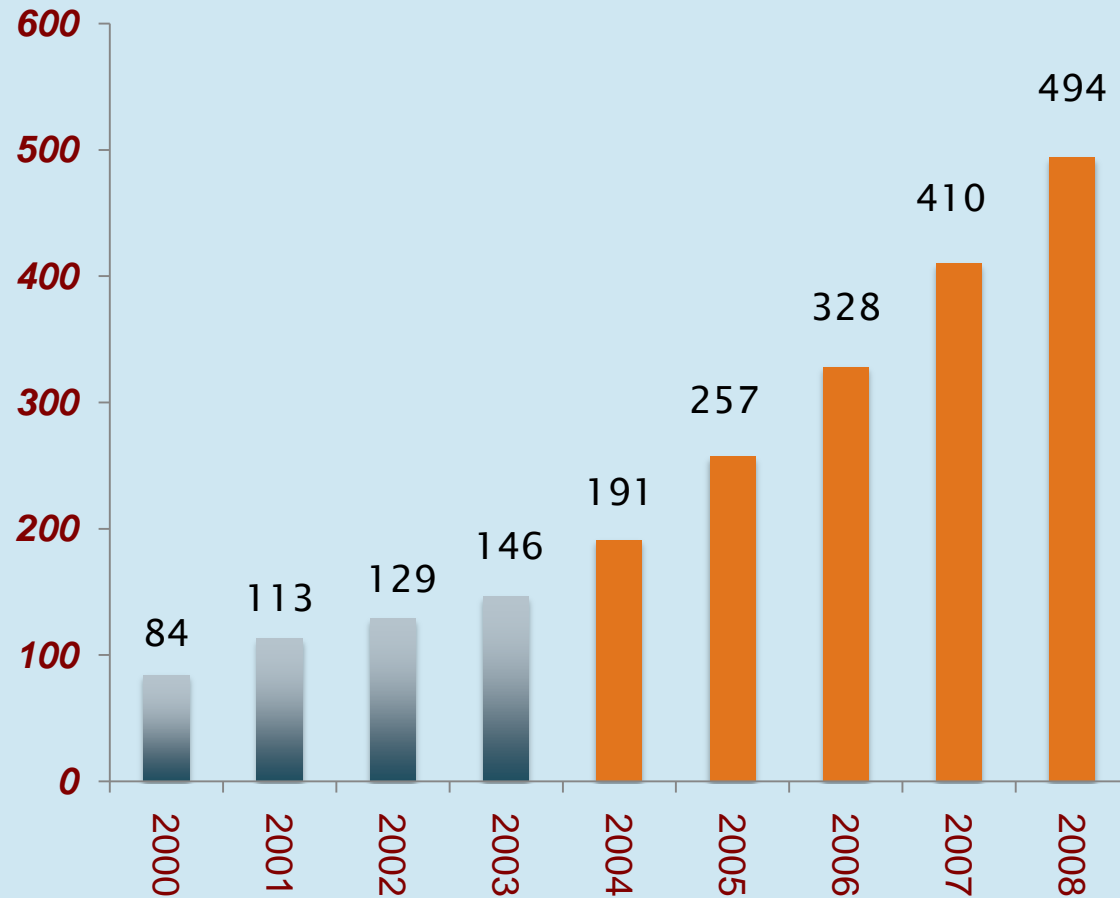


# Membership Stats

### Membership

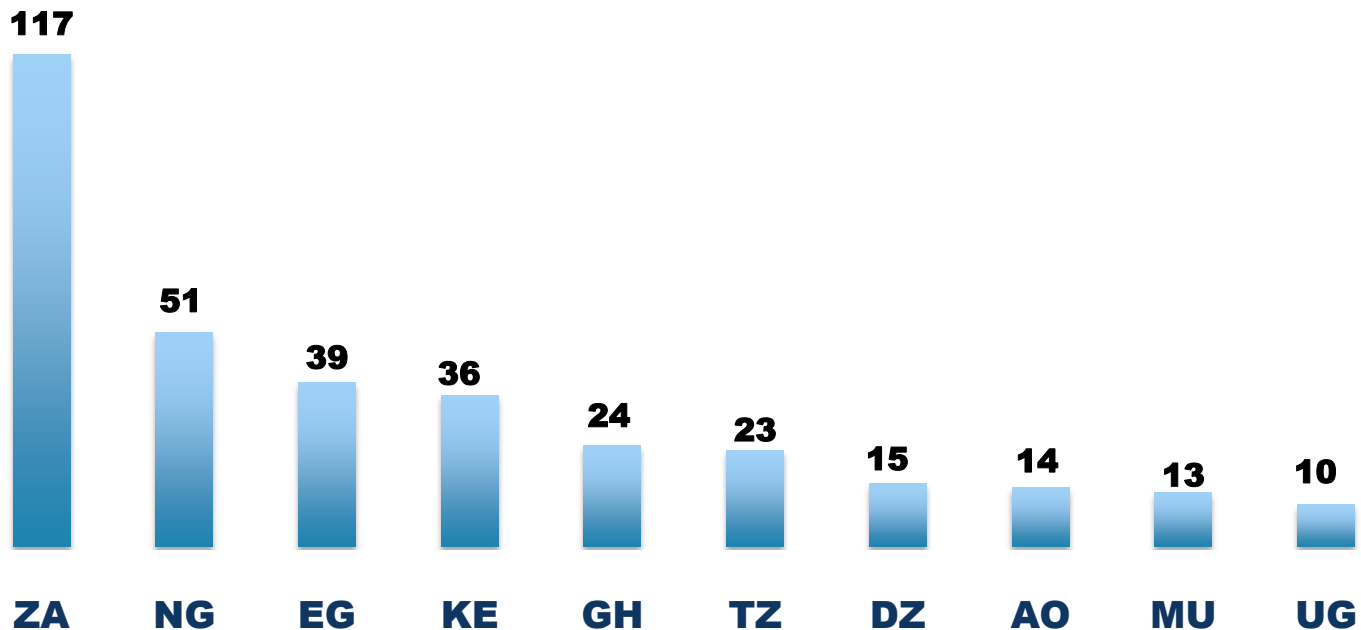


### Total membership Growth

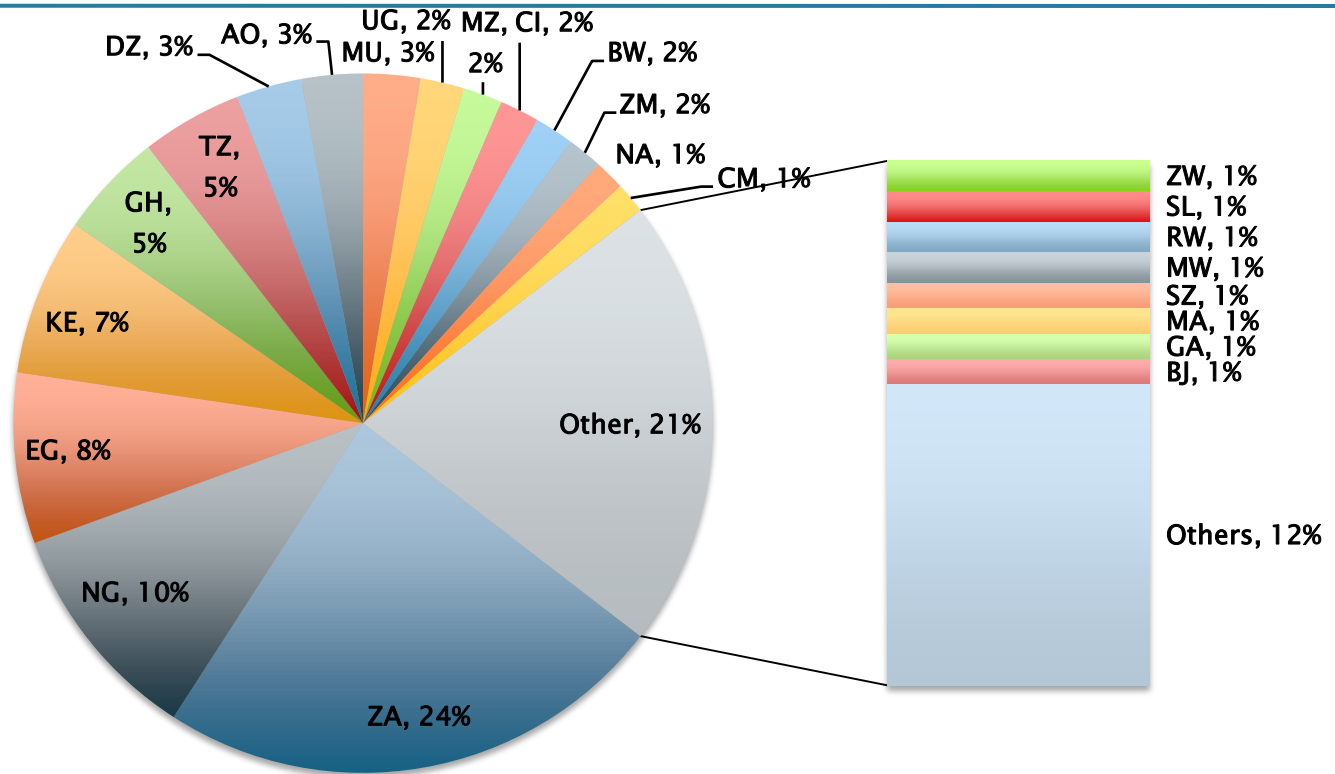


# Membership Stats

Membership Distribution – Top 10



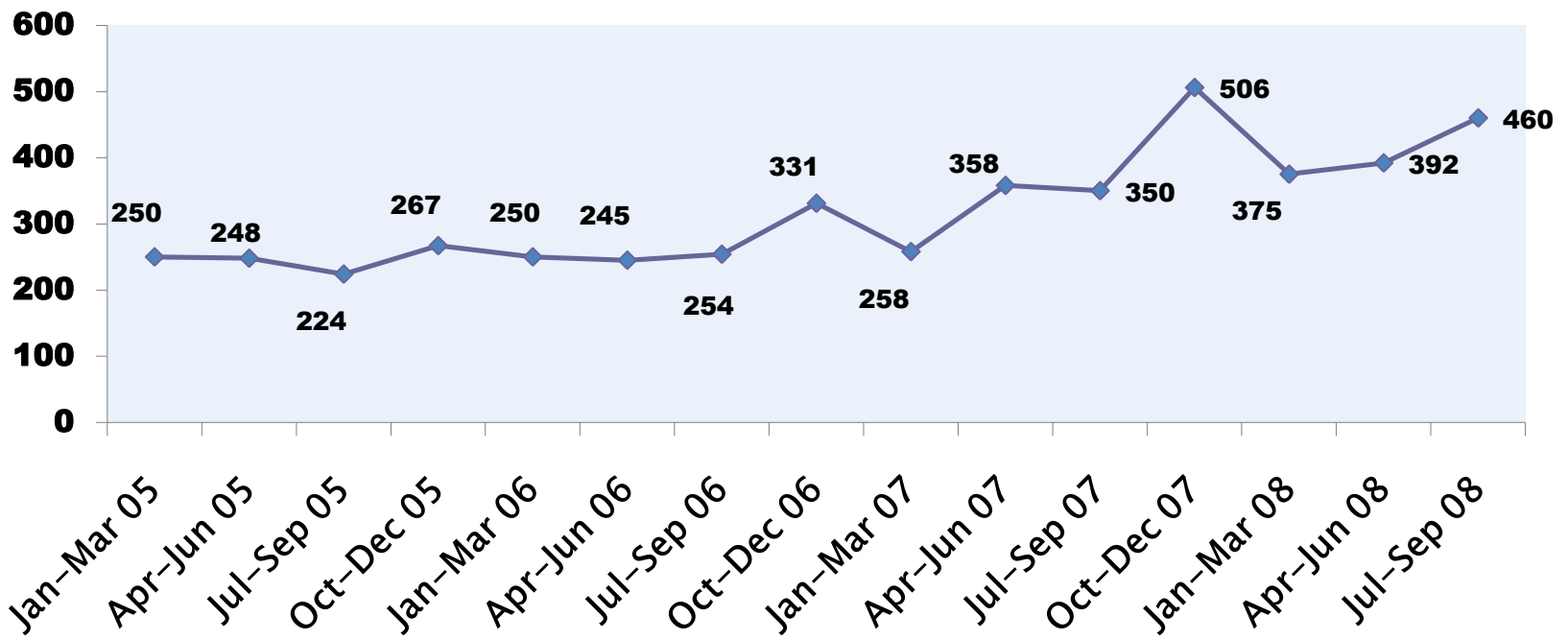
# Membership Stats



ZA	NG	EG	KE	GH	TZ	DZ	AO	MU
UG	MZ	CI	BW	ZM	NA	CM	ZW	SL
RW	MW	SZ	MA	GA	BJ	Others		

# Request Stats

### Requests handled







---

▶ Thank You.

