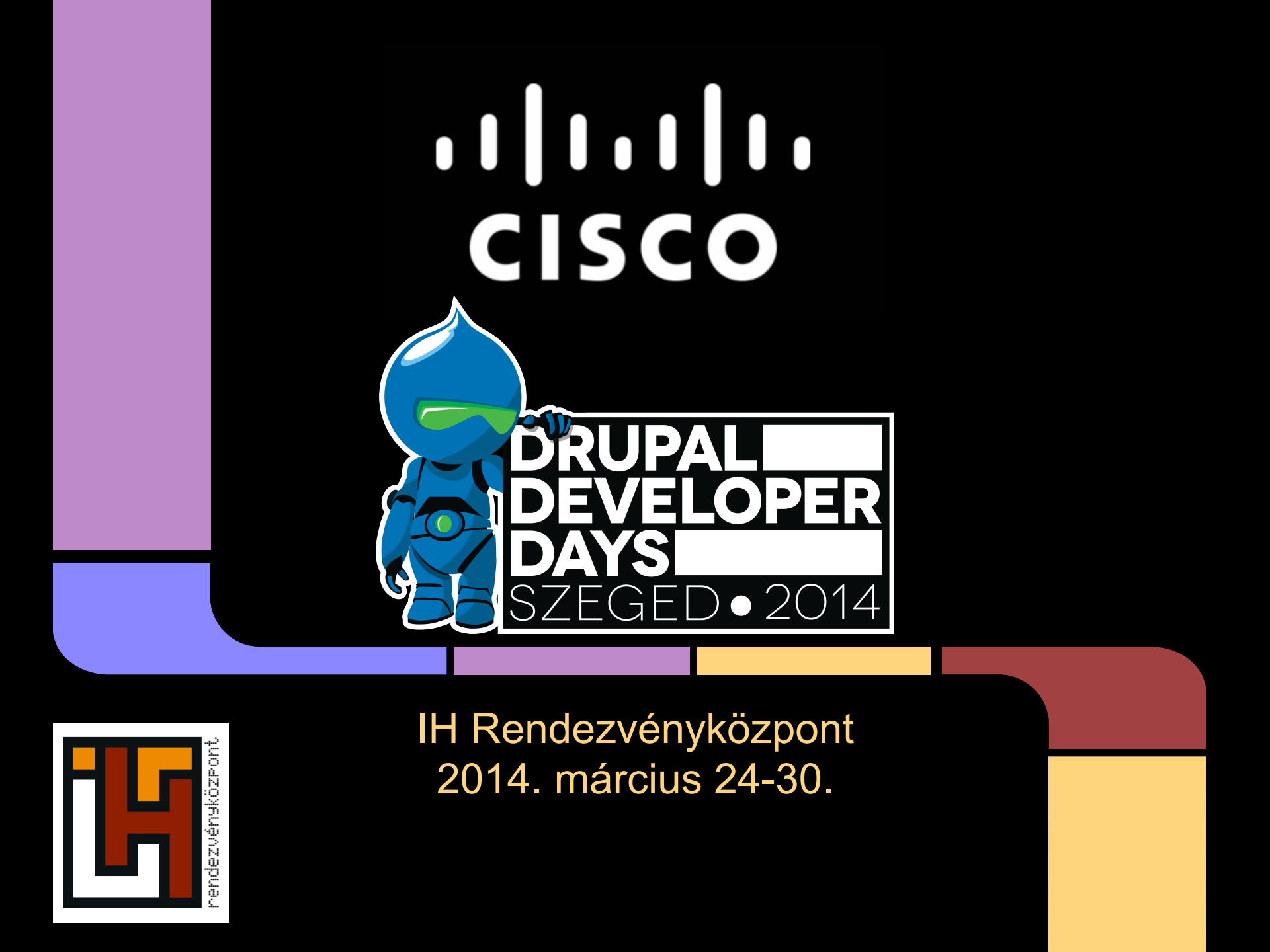

CISCO
DRUPAL
DEVELOPER
DAYS
SZEGED • 2014
IH Rendezvényközpont
2014. március 24-30.
rendezvényközpont.

Felvezető videó

https://www.youtube.com/watch?v=nItJtzBhz-Q

Drupal közösség 2008-ban Szegeden

A bemutatás alapján ízelítőt kaphattunk arról, hogy világszerte több millióan használják és fejlesztik a Drupal-t, így hozzájárulnak a rendszer sikeréhez. A Drupal mögött egy rendkívül aktív nemzetközi közösség áll. A világ minden táján tartanak rendezvényeket, amelyek a Drupal-hoz kapcsolódó közösségépítő, üzleti és fejlesztői témákat ölelnek fel.

A fotót készítette: TeeCee (Szügyi Tamás)

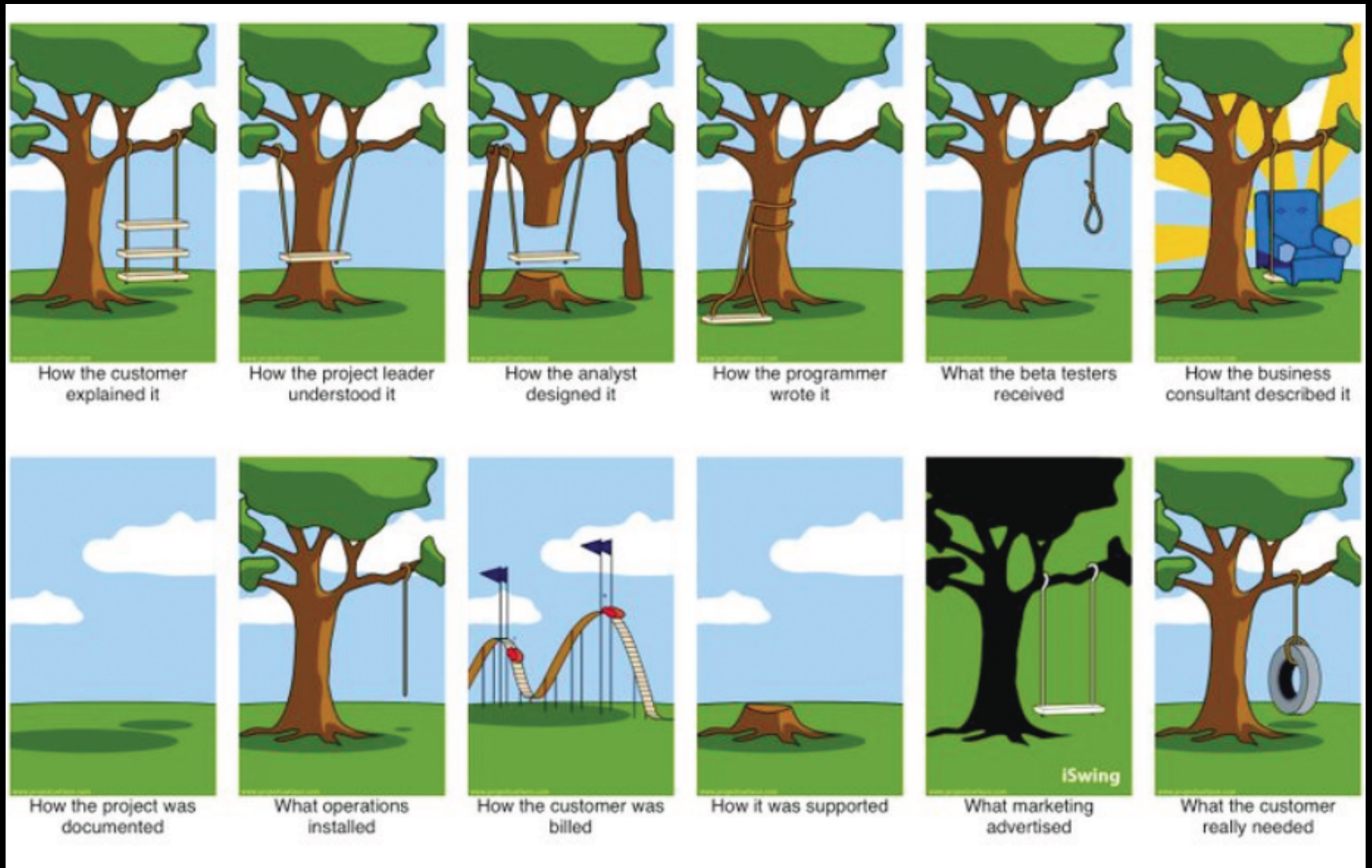
Drupal Developer Days Szeged

A Drupal Developer Days nemzetközi szoftverfejlesztő vándorkonferencia 2010. óta kerül megrendezésre; München, Brüsszel, Barcelona és Dublin után, 2014. március 24-30. között Szeged adott otthont az eseménynek.

A kb. 330 fő részvételével lezajlott rendezvény egy teljes héten keresztül programozói sprinteket, workshopokat és előadásokat foglalt magában. A rendezvényen a Top15 Drupal fejlesztők többsége is jelen volt.

Fotó: TeeCee (Szügyi Tamás)

Igények


How the customer explained it
How the project leader understood it
How the analyst designed it
How the programmer wrote it
What the beta testers received
How the business consultant described it
How the project was documented
What operations installed
How the customer was billed
How it was supported
iSwing
What marketing advertised
What the customer really needed

Igények

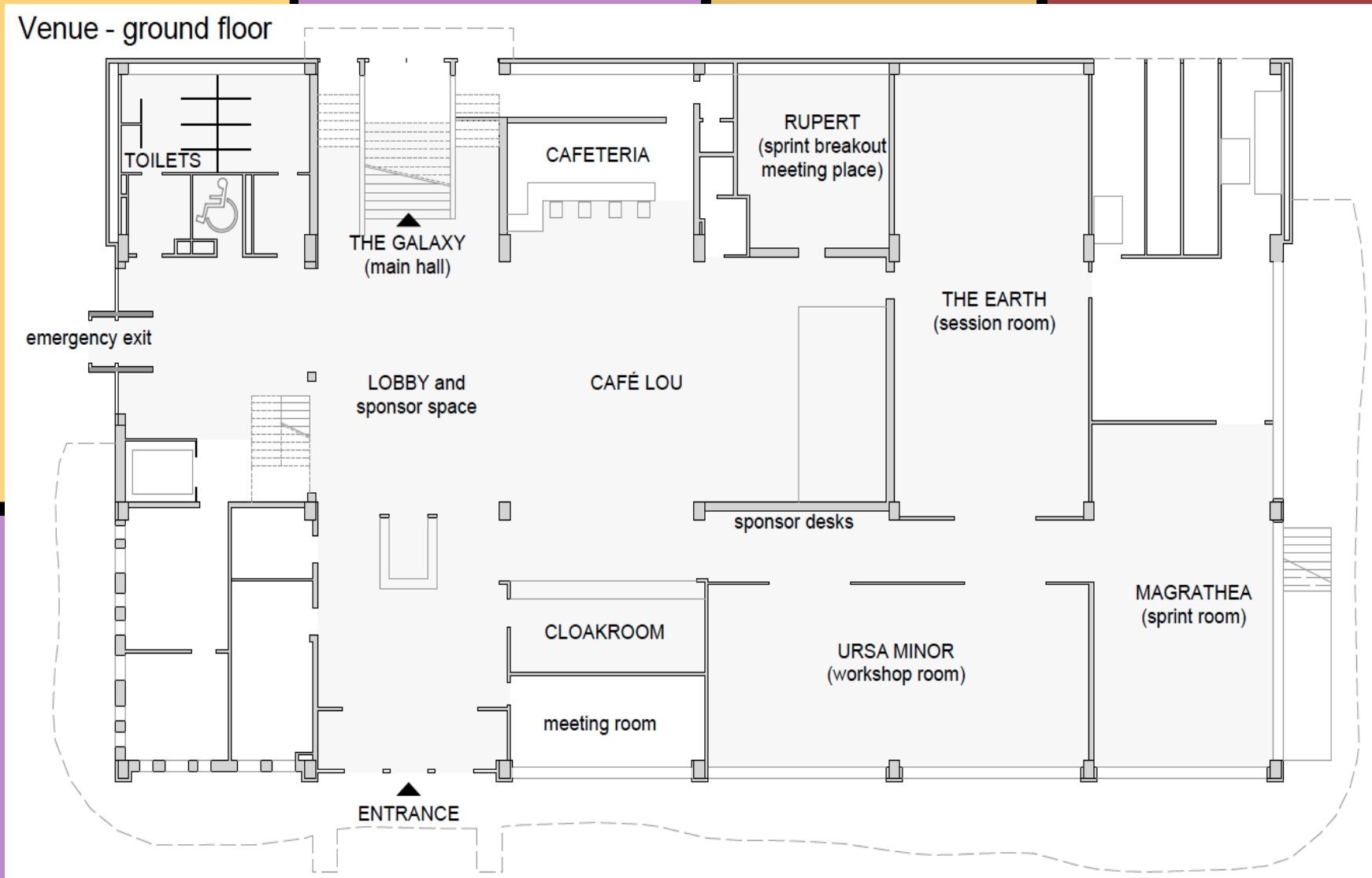
- stabil Internet kapcsolat kialakítása
  - (99.9%-os rendelkezésre állás kevés)
  - több megbízhatatlan vonal
  - load-balancing
- stabil, magas rendelkezésre állású Wi-Fi biztosítása
  - 333 ember
  - 999 kliens
- helyszíni rendszerfelügyelet

Létszám

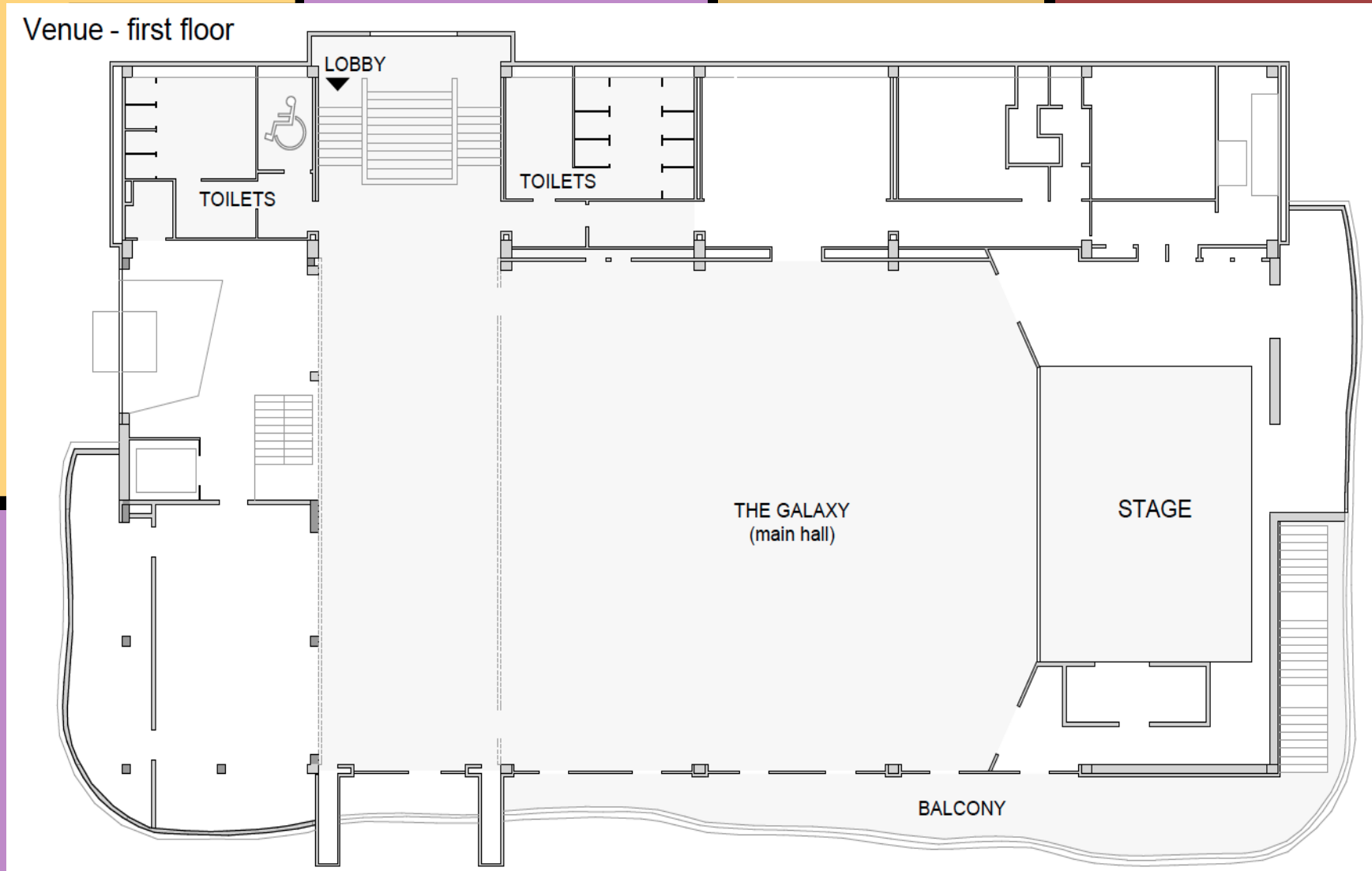
Helyszín - IH Rendezvényközpont

- sprintek: 9:00-23:59 (H-Szo) + V 16 óráig
- előadások: 9:00-17:00 (Cs-P-Szo)
- support időtartam 8:00-20:00
- 2 szint
- 937 m²
- 6 helyiség

IH Rendezvényközpont földszint



IH Rendezvényközpont emelet



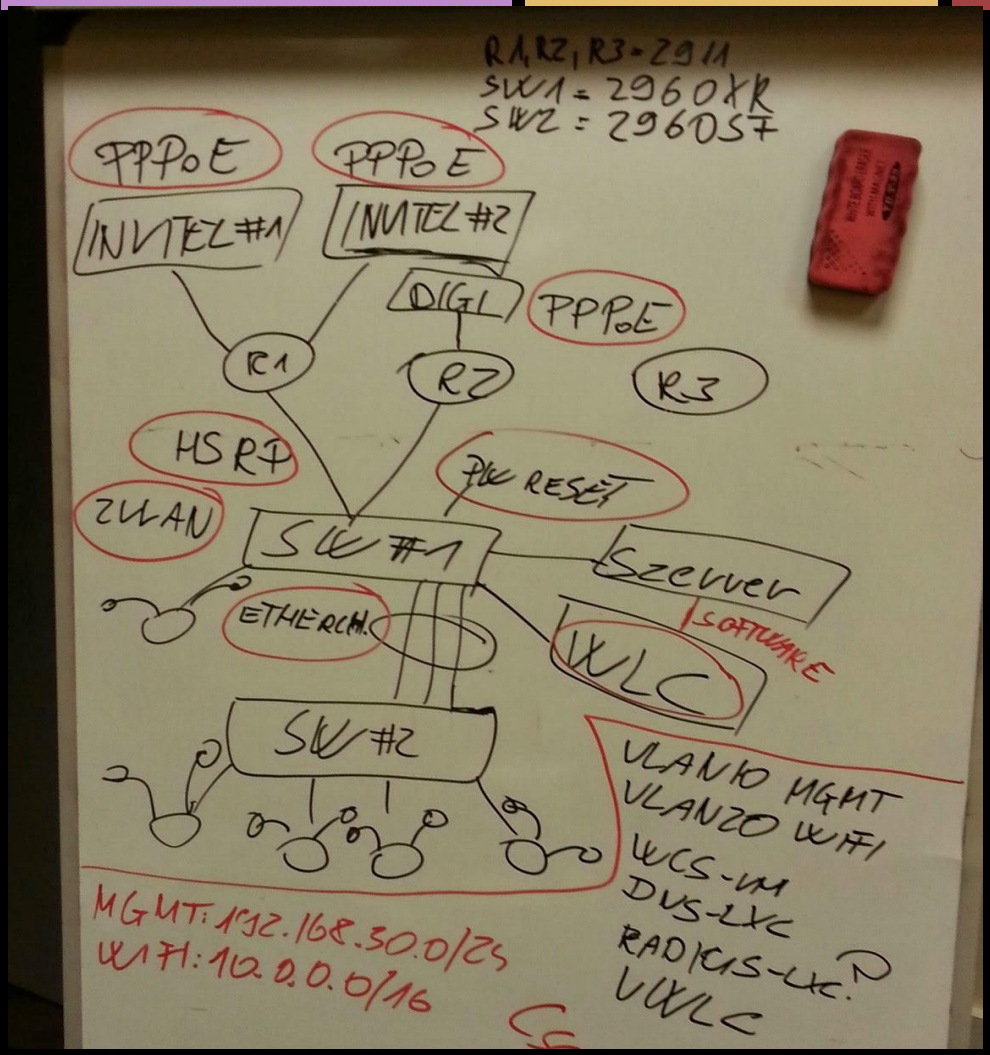
Sprintek a gyakorlatban

Internet vonalak - 2n+1 redundancia

2x Invitel
150/60 Mbps
lakossági optika
QoS módosítás után:
160/70 Mbps

1x Digi
80/40 Mbps
WiFi átlövés
gyakorlatban:
60/25 Mbps

Topológiatervezés



Eszközök

- 3x 2911 ISR router - (SZTE-CLAB)
- 1x 2960 XR switch
  - 24x 1Gbps + 4x 1Gbps SFP+, stack-elhető, dupla táp, PoE+ 730W
- 1x 2960 SF switch
  - 24x 100 Mbps + 2x 1Gbps SFP+, PoE 370W
- 1x 3560v2 switch
  - 48x 100 Mbps + 3x 1 Gbps SFP+, PoE 370W
- 1x 2504 WLC

AP-k

2x 1142i 300 Mbps, a/g/n, 13W (max 16 client)

5x 2602i 450 Mbps, a/b/g/n, 15,4W

4x 2602e 450 Mbps, a/b/g/n, 15,4W

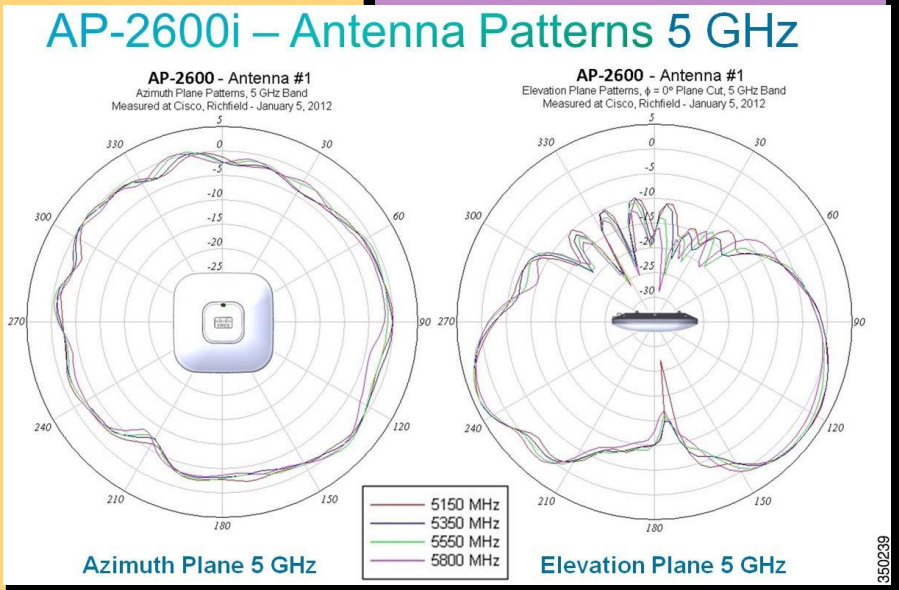
1x 3502i 450 Mbps, a/b/g/n, 15,4W

1x 3502e 450 Mbps, a/b/g/n, 15,4W

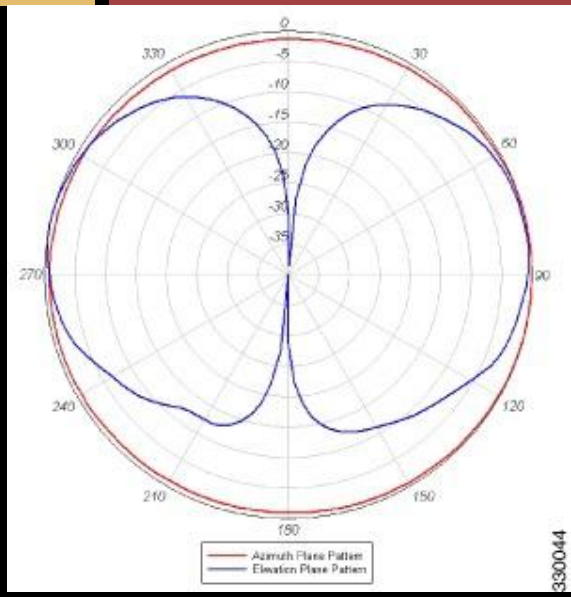
2x 3602e 450 Mbps+1,3 Gbps, a/b/g/n/ac, 15,4W +18W

Összesen: 15 db AP, 554,4W PoE-n

Antennák

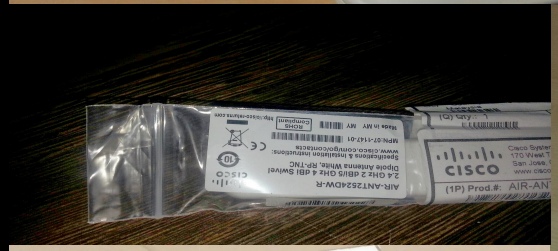


External



Internal

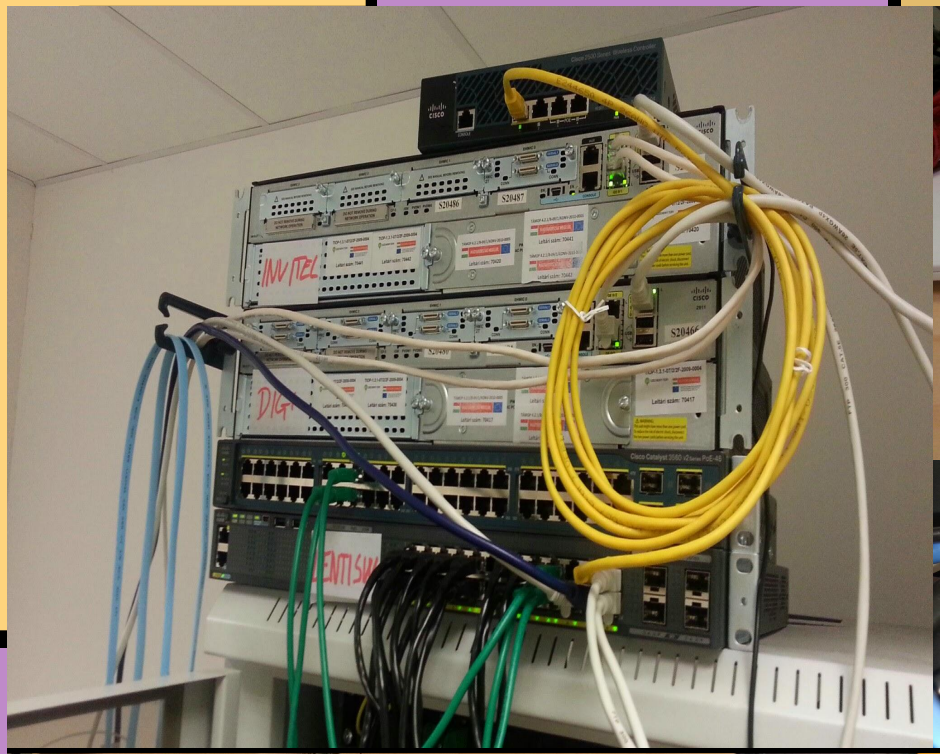
Konzolok, AP-k kiépítése

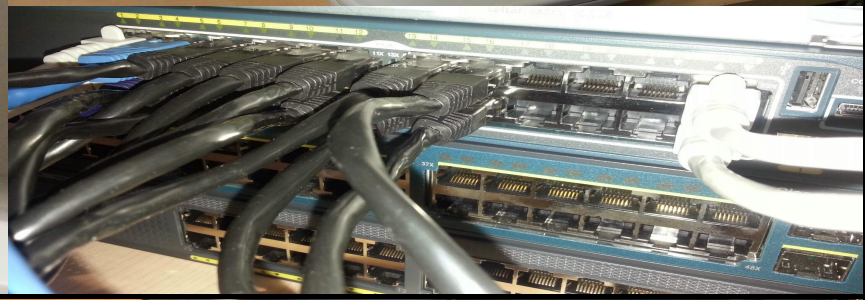


Szerverek

- Dell Poweredge 1950
  - Intel Xeon X5420
  - 6 GB DDR2-ECC
  - 2x76 GB 10k SCSI, Dell Perc6i+BBU,
  - vmware ESXi 5.5:
    - DHCP @ Ubuntu 12.04.4 LTS,
    - Wireless Control System@ Windows Server 2003
- IBM M3400 M4
  - Intel Xeon E3-1220v2
  - 8 GB DDR3-1600 ECC
  - 3x150GB 10k SCSI, IBM1015
  - vmware ESXi 5.5:
    - Cisco Prime

Eszközök képekben





Felhasznált technológiák

Főbb technológiak konkrétan

Etherchannel 3x100 Mbps

```
interface Port-channel1
 switchport trunk allowed vlan 10,30
 switchport mode trunk

interface range FastEthernet1/0/13-16
 switchport trunk allowed vlan 10,30
 switchport mode trunk
 spanning-tree portfast
 channel-group 1 mode on
```

Főbb technológiak konkrétan

PPPoE

```
interface Dialer2
 mtu 1492
 ip address negotiated
 ip nat outside
 ip virtual-reassembly in
 encapsulation ppp
 ip tcp adjust-mss 1452
 dialer pool 2
 ppp authentication pap callin
 ppp pap sent-username drupal password 7 xxxxxxxxxxxxxxxxxxxx
 ppp ipcp route default
```

Főbb technológiak konkrétan

Multi-WAN NAT

```
interface GigabitEthernet0/1
 no ip address
 pppoe enable group global
 pppoe-client dial-pool-number 1

route-map fixinvitel permit 10
 match ip address 1
 match interface Dialer1
route-map drupal permit 10
 match ip address 1
 match interface Dialer2

ip nat inside source route-map drupal interface Dialer2 overload
ip nat inside source route-map fixinvitel interface Dialer1 overload
```

Főbb technológiak konkrétan

HSRP - link-state

```
interface GigabitEthernet0/0.10
 standby 1 ip 10.0.255.254
 standby 1 priority 110
 standby 1 preempt
```

ip track (SLA)

track 1 ip sla 5 state

ip sla 5

icmp-echo 8.8.8.8

frequency 10

ip sla schedule 5 start-time now life forever

(ez DATA license hiányában nem valósult meg)

IOS frissítés

- pár téglázott eszköz
  - memória hiba
  - reflash:
    - tftp, xmodem
- lejelszavazott eszköz
  - password recovery procedure
- IOS verziók egységesítése
  - legfrisebb 15-ös image upgrade

Kábelezés, mérések

- CAT5e kábel
  - 1 dob (305m)
  - kábelek krimpelése
  - tesztelése (Fluke, led-es teszter)
- WiFi:
  - Fluke Aircheck
  - Android Wifi analyzer
  - inSSIDer
- Cisco Prime Network Control Software

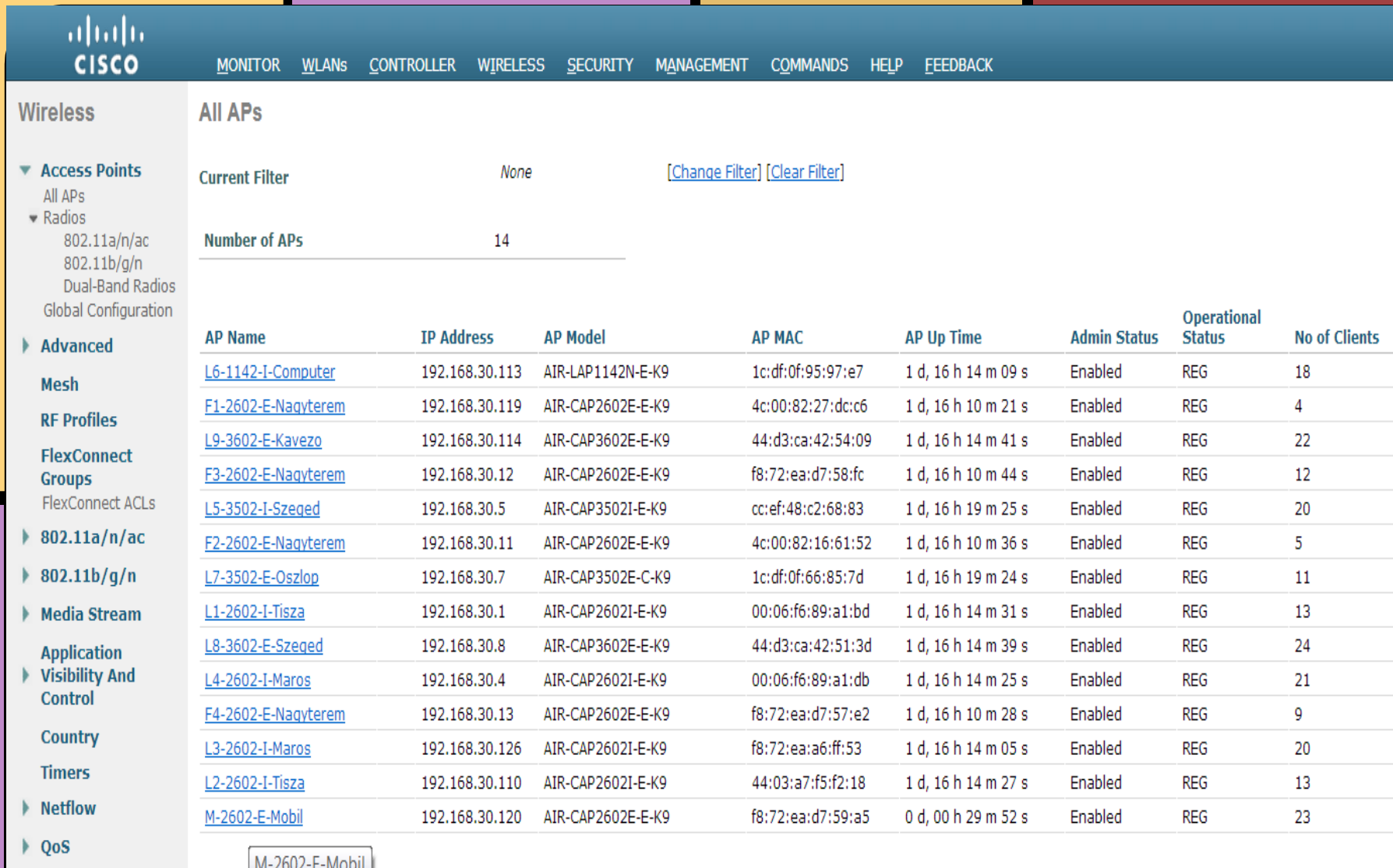
Wireless Lan Controller

- központi management
  - LWAP-os IOS kell hozzá
- AP terhelés-elosztás
- kliens roaming
- egyszerű WLAN kiajánlás
- teljesítmény adatok grafikonozása

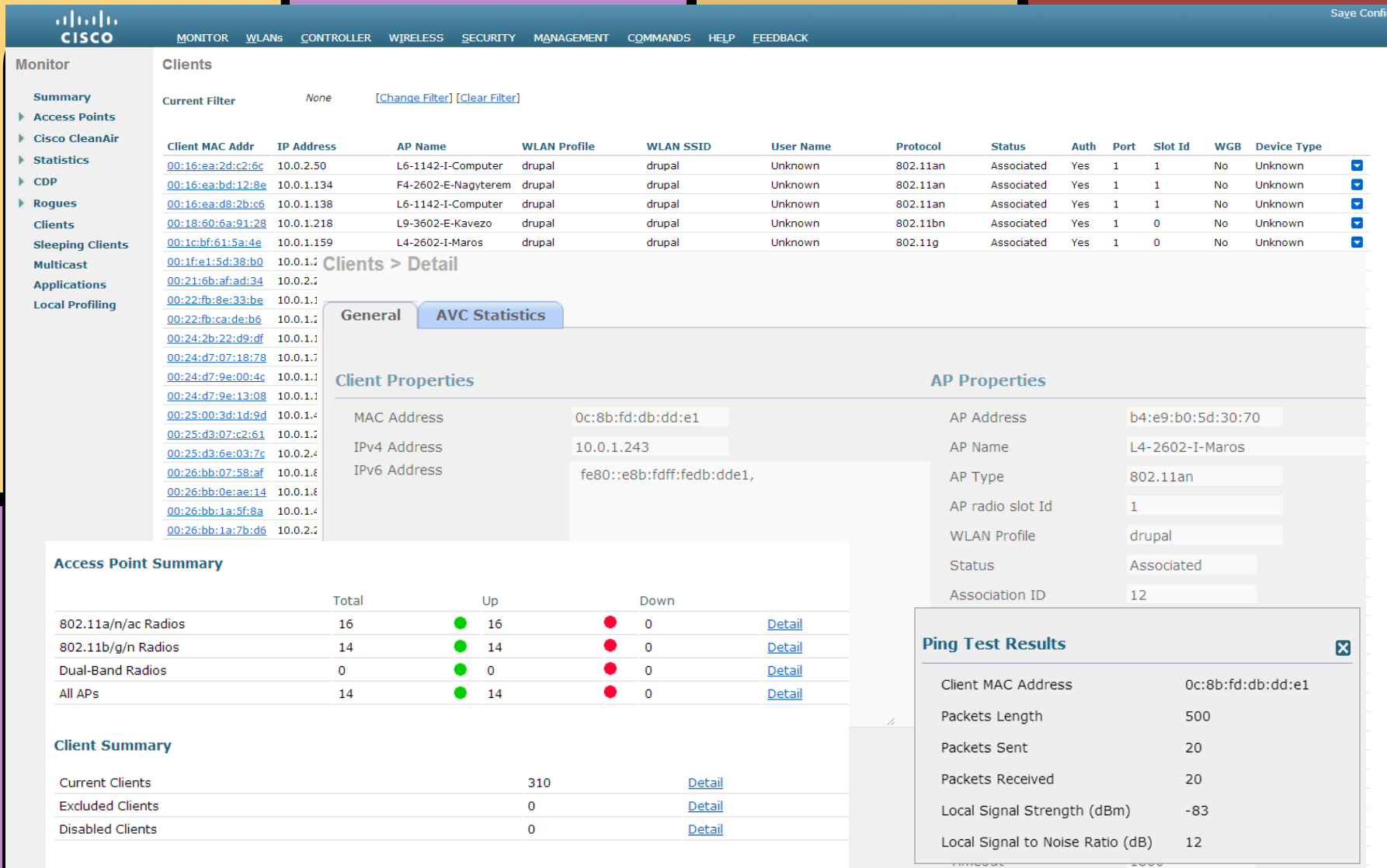
Problémák

- HSRP
  - router kábelhiba
  - switch megzavarodott
  - át kellett terelni a klienseket a tartalék switch-re (tartalék switch-en etherchannel + AP-k mozgatása egyesével)
- Fali csatlakozó hiba
  - Fluke eszközökkel történt mérések
- WPA2-PSK vs. ENT
  - user error (korábban használt drupal ssid)
- Kiakasztottuk a drupal.org és a Freenode IRC DoS védelmét
- Interferencia 2,4Ghz-en
  - monitor AP

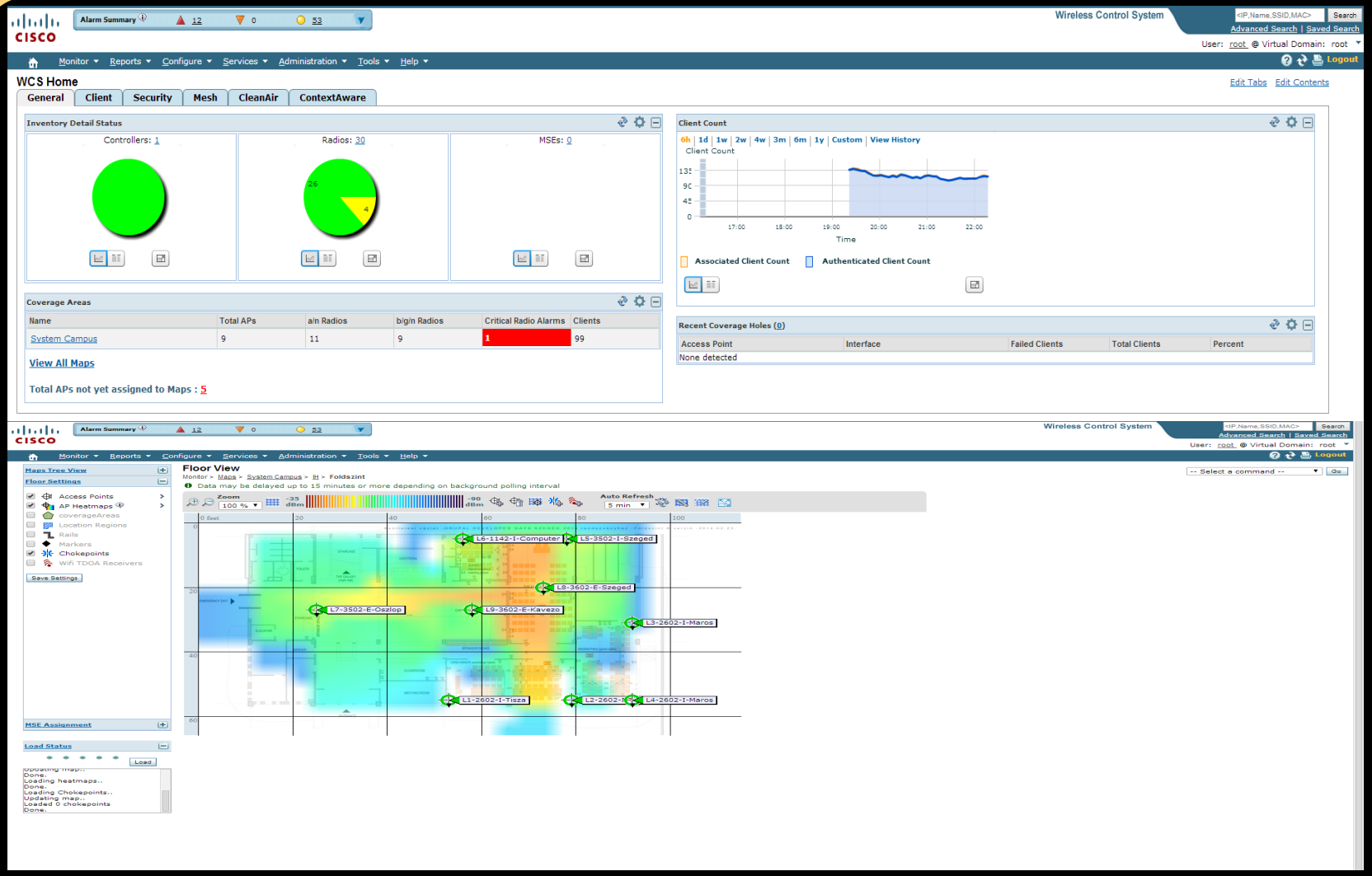
Wireless Lan Controller - AP-k



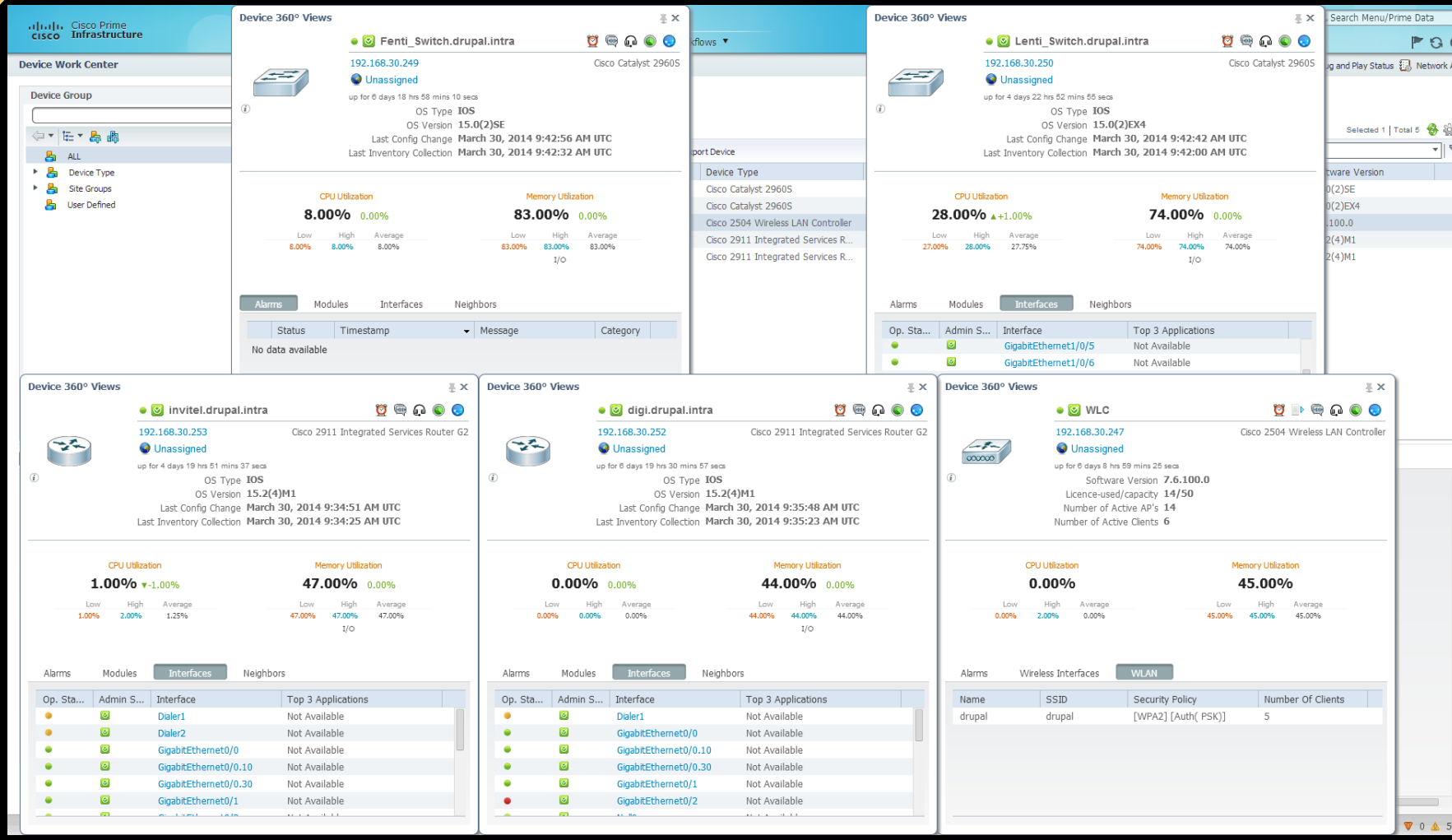
Wireless Lan Controller - kliensek



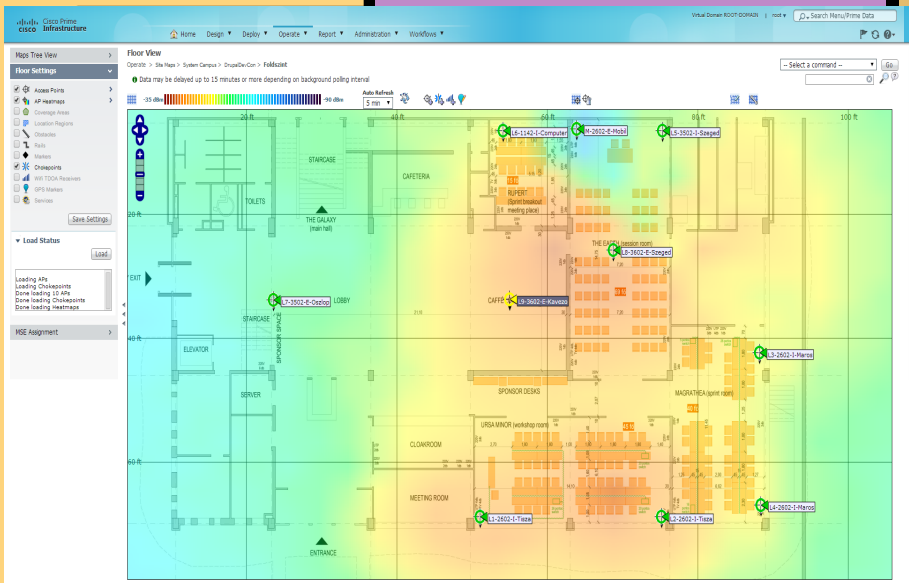
Cisco Wireless Control System

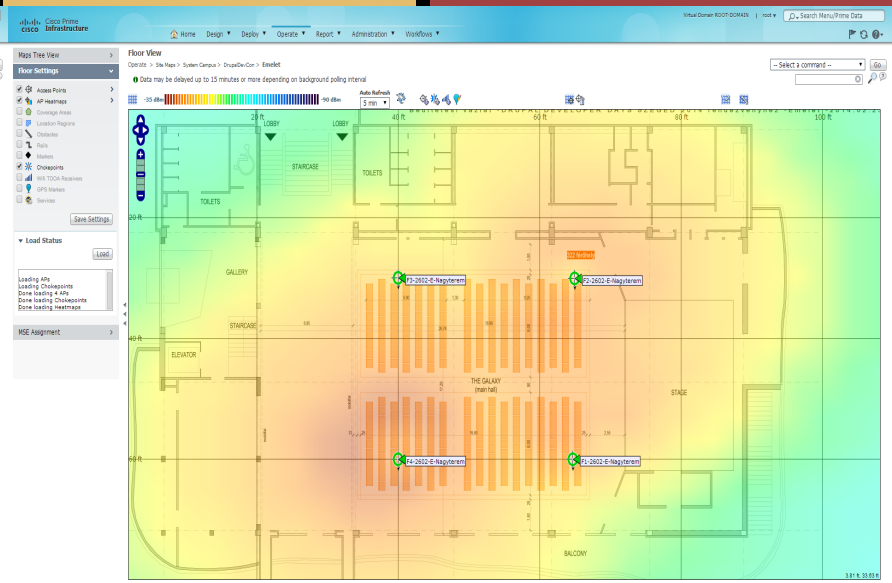


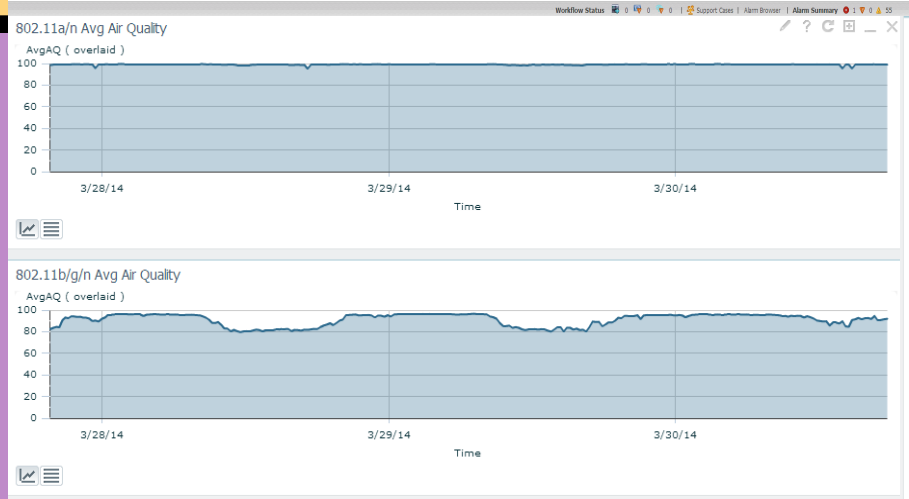
Cisco Prime

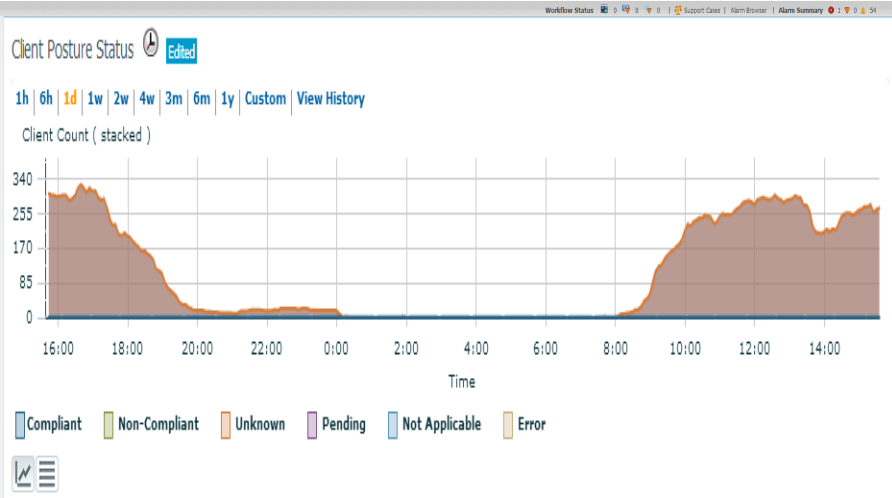

Cisco Prime Infrastructure
Device Work Center
Device Group
ALL
Device Type
Site Groups
User Defined
Device 360° Views
Fenti_Switch.drupal.intra
192.168.30.249
Cisco Catalyst 2960S
Unassigned
up for 6 days 18 hrs 58 mins 10 secs
OS Type IOS
OS Version 15.0(2)SE
Last Config Change March 30, 2014 9:42:56 AM UTC
Last Inventory Collection March 30, 2014 9:42:32 AM UTC
CPU Utilization
8.00% 0.00%
Low High Average
8.00% 8.00% 8.00%
Memory Utilization
83.00% 0.00%
Low High Average
83.00% 83.00% 83.00%
I/O
Alarms Modules Interfaces Neighbors
Status Timestamp Message Category
No data available
Device Type
Cisco Catalyst 2960S
Cisco Catalyst 2960S
Cisco 2504 Wireless LAN Controller
Cisco 2911 Integrated Services R...
Cisco 2911 Integrated Services R...
Device 360° Views
Lenti_Switch.drupal.intra
192.168.30.250
Cisco Catalyst 2960S
Unassigned
up for 4 days 22 hrs 52 mins 55 secs
OS Type IOS
OS Version 15.0(2)EX4
Last Config Change March 30, 2014 9:42:42 AM UTC
Last Inventory Collection March 30, 2014 9:42:00 AM UTC
CPU Utilization
28.00% ▲+1.00%
Low High Average
27.00% 28.00% 27.75%
Memory Utilization
74.00% 0.00%
Low High Average
74.00% 74.00% 74.00%
I/O
Alarms Modules Interfaces Neighbors
Op. Sta... Admin S... Interface Top 3 Applications
GigabitEthernet1/0/5 Not Available
GigabitEthernet1/0/6 Not Available
Search Menu/Prime Data
Selected 1 | Total 5
Device 360° Views
invitel.drupal.intra
192.168.30.253
Cisco 2911 Integrated Services Router G2
Unassigned
up for 4 days 19 hrs 51 mins 37 secs
OS Type IOS
OS Version 15.2(4)M1
Last Config Change March 30, 2014 9:34:51 AM UTC
Last Inventory Collection March 30, 2014 9:34:25 AM UTC
CPU Utilization
1.00% ▼-1.00%
Low High Average
1.00% 2.00% 1.25%
Memory Utilization
47.00% 0.00%
Low High Average
47.00% 47.00% 47.00%
I/O
Alarms Modules Interfaces Neighbors
Op. Sta... Admin S... Interface Top 3 Applications
Dialer1 Not Available
Dialer2 Not Available
GigabitEthernet0/0 Not Available
GigabitEthernet0/0.10 Not Available
GigabitEthernet0/0.30 Not Available
GigabitEthernet0/1 Not Available
Device 360° Views
digi.drupal.intra
192.168.30.252
Cisco 2911 Integrated Services Router G2
Unassigned
up for 6 days 19 hrs 30 mins 57 secs
OS Type IOS
OS Version 15.2(4)M1
Last Config Change March 30, 2014 9:35:48 AM UTC
Last Inventory Collection March 30, 2014 9:35:23 AM UTC
CPU Utilization
0.00% 0.00%
Low High Average
0.00% 0.00% 0.00%
Memory Utilization
44.00% 0.00%
Low High Average
44.00% 44.00% 44.00%
I/O
Alarms Modules Interfaces Neighbors
Op. Sta... Admin S... Interface Top 3 Applications
Dialer1 Not Available
GigabitEthernet0/0 Not Available
GigabitEthernet0/0.10 Not Available
GigabitEthernet0/0.30 Not Available
GigabitEthernet0/1 Not Available
GigabitEthernet0/2 Not Available
Device 360° Views
WLC
192.168.30.247
Cisco 2504 Wireless LAN Controller
Unassigned
up for 6 days 8 hrs 59 mins 25 secs
Software Version 7.6.100.0
Licence-used/capacity 14/50
Number of Active AP's 14
Number of Active Clients 6
CPU Utilization
0.00%
Low High Average
0.00% 2.00% 0.00%
Memory Utilization
45.00%
Low High Average
45.00% 45.00% 45.00%
Alarms Wireless Interfaces WLAN
Name SSID Security Policy Number Of Clients
drupal drupal [WPA2] [Auth(PSK)] 5

Cisco Prime


Cisco Prime Infrastructure
Floor View
Load Status
MSE Assignment


Cisco Prime Infrastructure
Floor View
Load Status
MSE Assignment


802.11a/n Avg Air Quality
AvgAQ (overlaid)
100
80
60
40
20
0
3/28/14
3/29/14
3/30/14
Time
802.11b/g/n Avg Air Quality
AvgAQ (overlaid)
100
80
60
40
20
0
3/28/14
3/29/14
3/30/14
Time


Client Posture Status
Edited
1h | 6h | 1d | 1w | 2w | 4w | 3m | 6m | 1y | Custom | View History
Client Count (stacked)
340
255
170
85
0
16:00
18:00
20:00
22:00
0:00
2:00
4:00
6:00
8:00
10:00
12:00
14:00
Time
Compliant
Non-Compliant
Unknown
Pending
Not Applicable
Error

Adatforgalmi statisztika

Aggregate | Upstream | Downstream

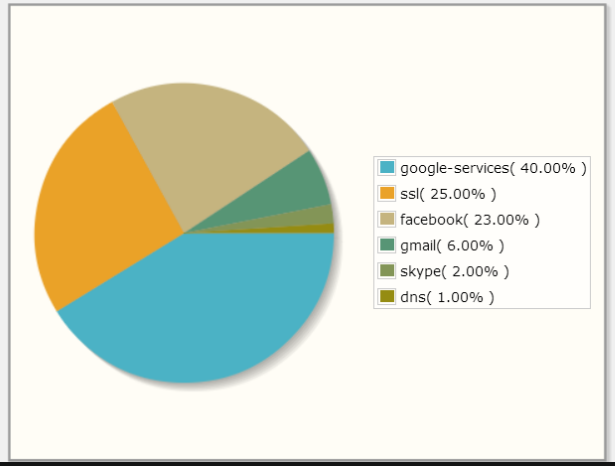
Application Last 90 Secs Stats

App Name	Packet Count	Byte Count	Average Packet Size	Usage(%)
google-services	792	699.31 KB	904	40.00
ssl	912	444.57 KB	499	25.00
facebook	626	404.88 KB	662	23.00
gmail	268	109.67 KB	419	6.00
skype	262	38.81 KB	151	2.00
dns	188	24.69 KB	134	1.00
netbios-ns	230	11.72 KB	52	0.00
http	37	6.58 KB	182	0.00
encrypted-emule	23	4.08 KB	181	0.00
icmp	21	2.62 KB	127	0.00

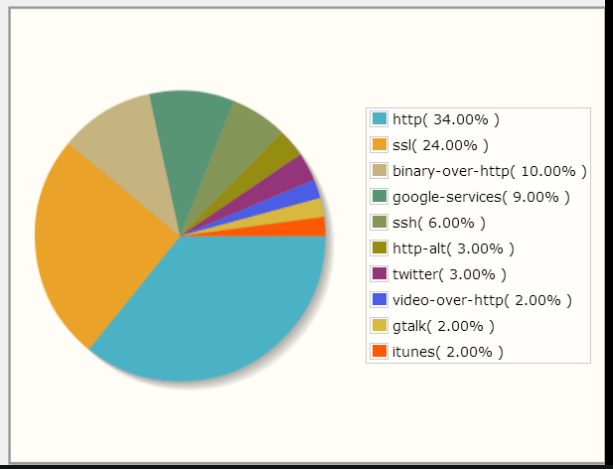
Application Cumulative Stats

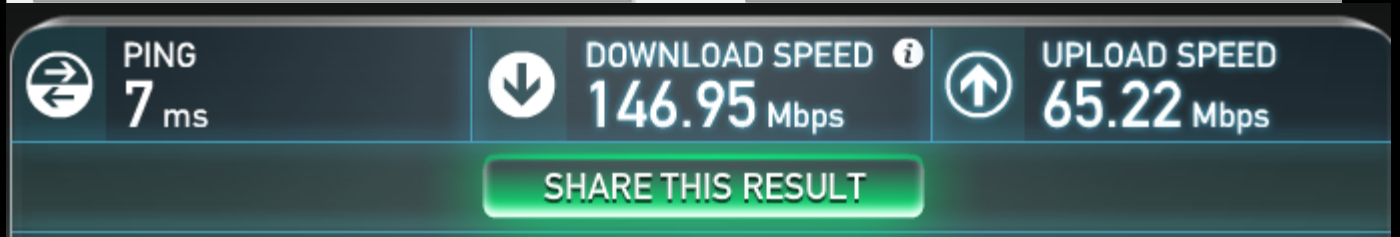
App Name	Packet Count	Byte Count	Usage(%)
http	149327685	143.03 GB	34.00
ssl	132906340	99.73 GB	24.00
binary-over-http	38340156	44.26 GB	10.00
google-services	67893627	39.45 GB	9.00
ssh	24993818	24.86 GB	6.00
http-alt	14504910	15.32 GB	3.00
twitter	28803839	12.80 GB	3.00
video-over-http	9795412	10.54 GB	2.00
gtalk	20111838	10.37 GB	2.00
itunes	9444926	9.52 GB	2.00

Application Last 90 Secs Usage(%)

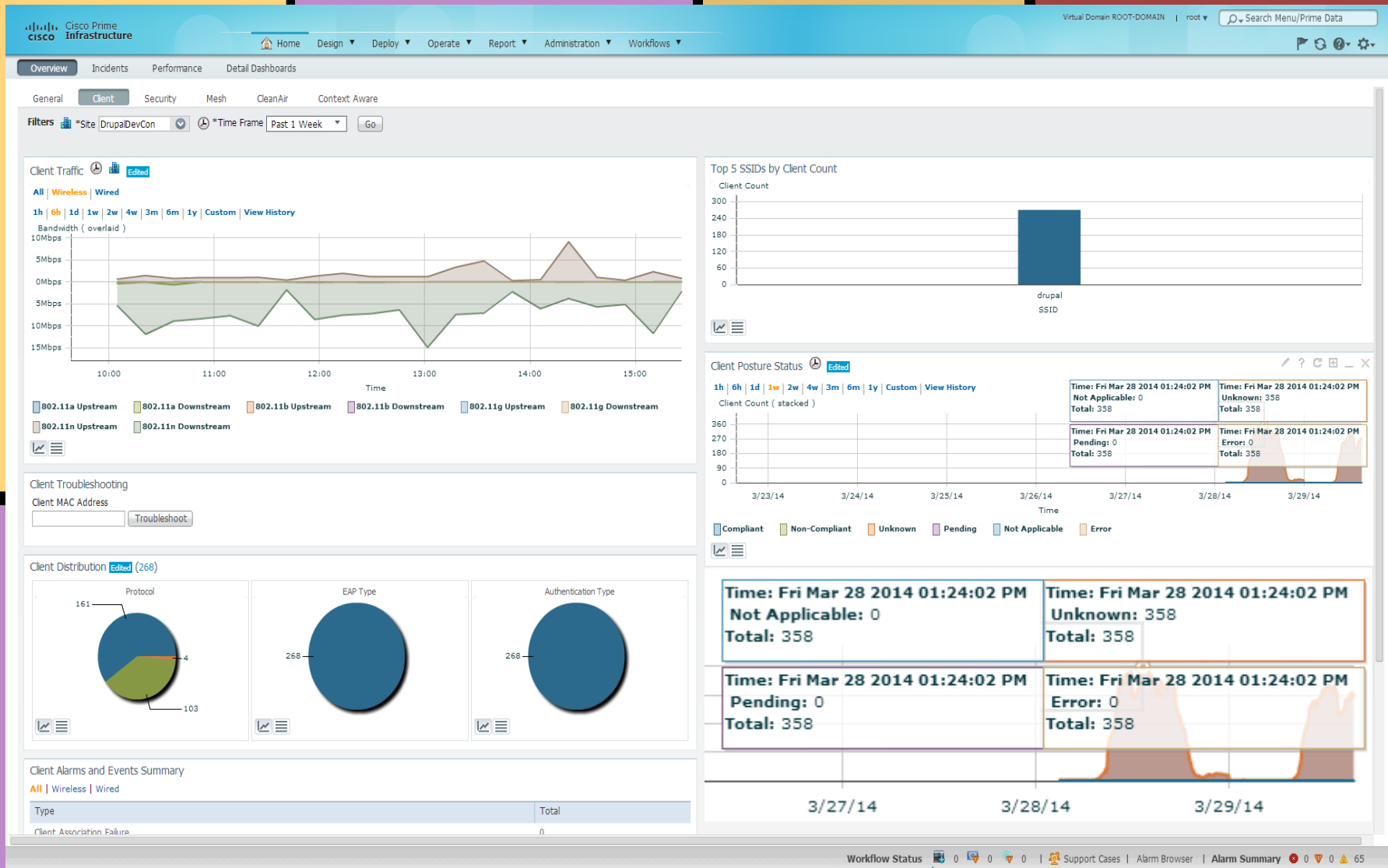


Application Cumulative Usage(%)





Adatforgalmi statisztika



NAT statisztika

```
  global   Display entries in Global/Dest Table - NVI
  icmp     Show ICMP entries
  pptp     Show PPTP entries
  rsvp     RSVP Translation entries
  tcp      Show TCP entries
  udp      Show UDP entries
  verbose  Show extra information
  vrf      Display entries of VRF instance
  |        Output modifiers
  <cr>

invitel#sh ip nat st
invitel#sh ip nat statistics
Total active translations: 37193 (0 static, 37193 dynamic; 37193 extended)
Peak translations: 60714, occurred 02:03:15 ago
Outside interfaces:
  Dialer1, Dialer2, Virtual-Access2, Virtual-Access3
Inside interfaces:
  GigabitEthernet0/0.10, GigabitEthernet0/0.30
Hits: 384357995  Misses: 0
CEF Translated packets: 378091070, CEF Punted packets: 5657138
Expired translations: 6936962
Dynamic mappings:
-- Inside Source
[Id: 1] route-map drupal interface Dialer2 refcount 13413
[Id: 2] route-map fixinvitel interface Dialer1 refcount 23787

Total doors: 7
Appl doors: 4
Normal doors: 3
Queued Packets: 0
invitel#
```

Köszönjük a figyelmet!

Cseh Péter

Janurik Viktor