

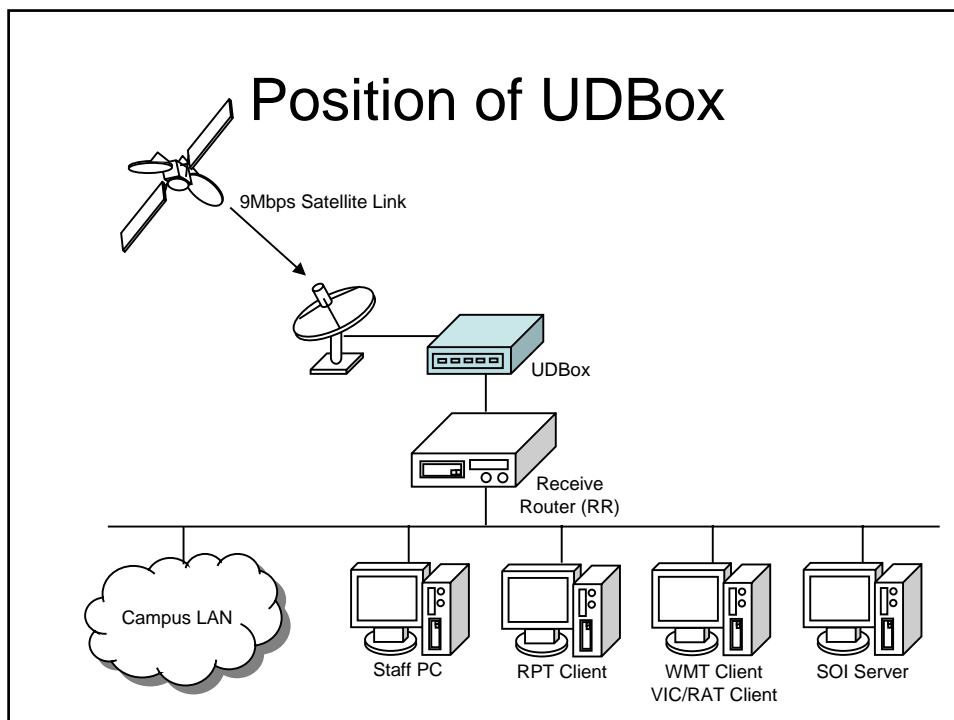
UDBox Instruction

Outline

- What is UDBox?
- UDBox Operation
 - Installation
 - Maintenance
 - Trouble Shooting

What is UDBox?

- Satellite Receiver for AI3/SOI-Asia Network
 - Satellite Demodulator and Bridge
 - Coax. Input
 - Ethernet Output
 - UDLR's Receiver Function
 - LLTM (GRE Encapsulation)



UDBox Operation

Installation

Installation Steps

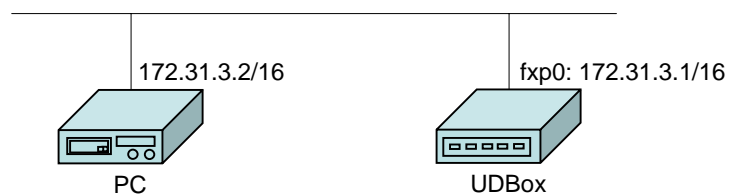
- Check the Power Voltage!!
- 1. Preparation
 - Connect a browser PC to UDBox
- 2. Step-by-Step Configuration
- 3. Network Installation
- 4. Tuner Configuration
- 5. Status Check

Power Voltage (115V or 2??V)



Connect a browser PC

- UDBox is configurable only by WEB (HTTPS)
 - Need another PC to configure UDBox
 - Default IP address of UDBox: 172.31.3.1/16
 - Give IP address 172.31.3.2/16 to Browser PC

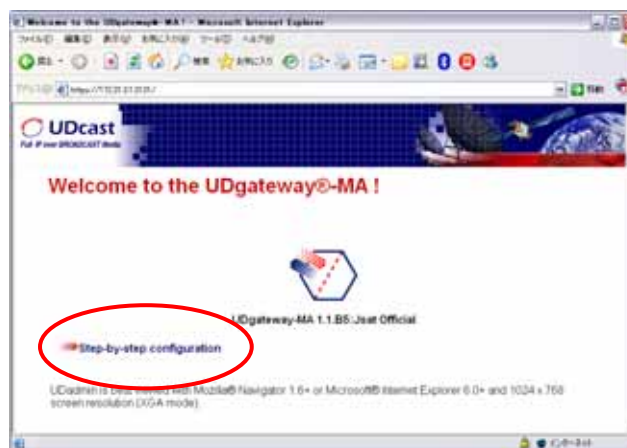


Interface for Initial Configuration

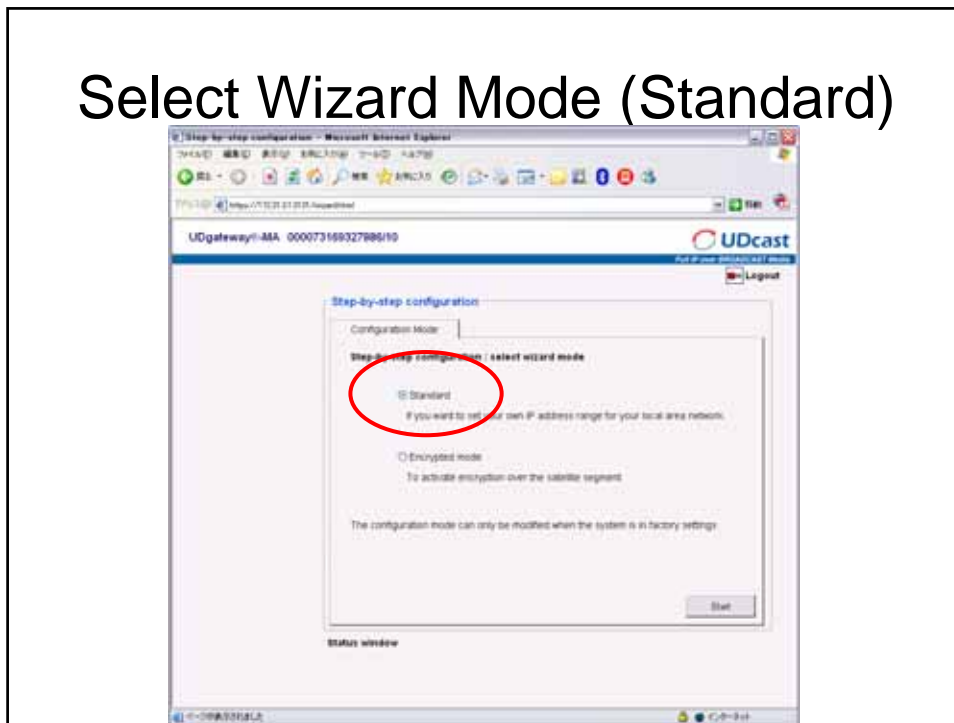


Start Step-by-Step Configuration

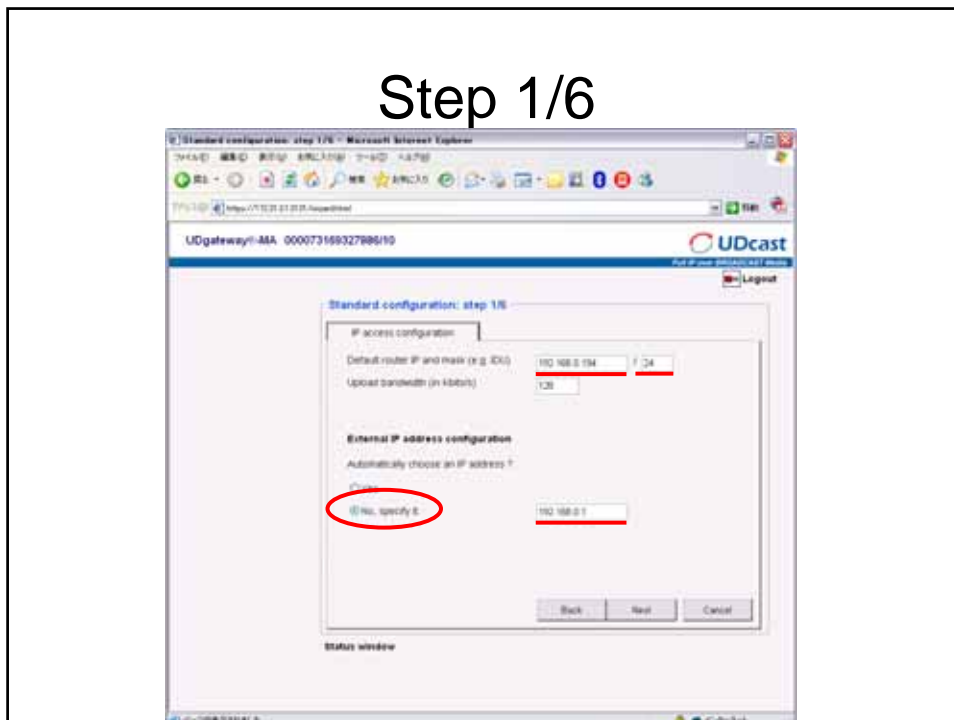
- Access <https://172.31.3.1:3131/>



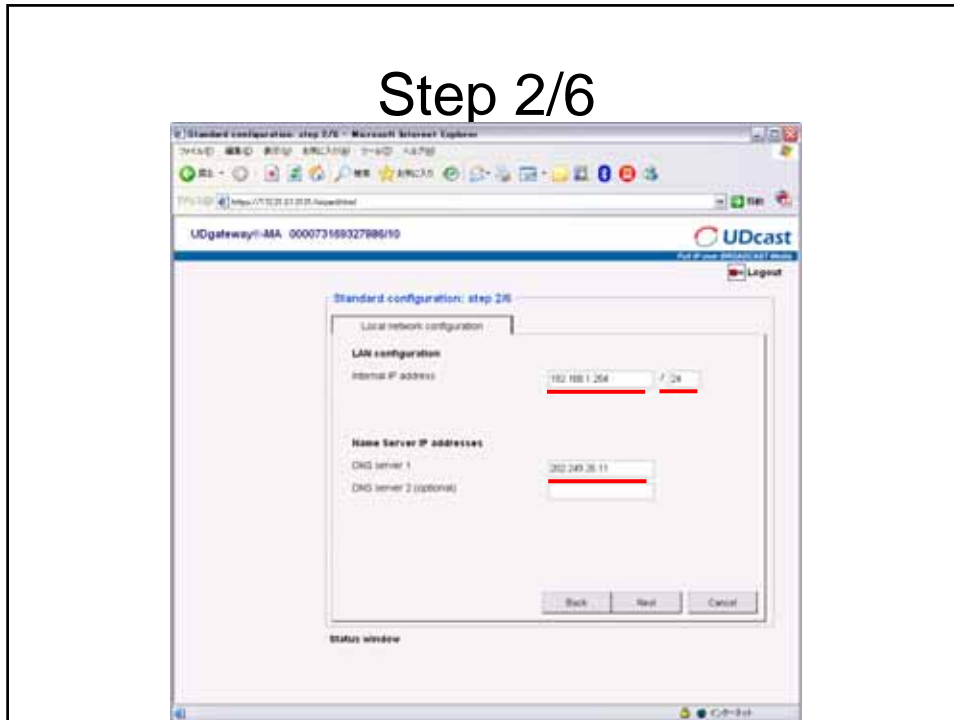
Select Wizard Mode (Standard)



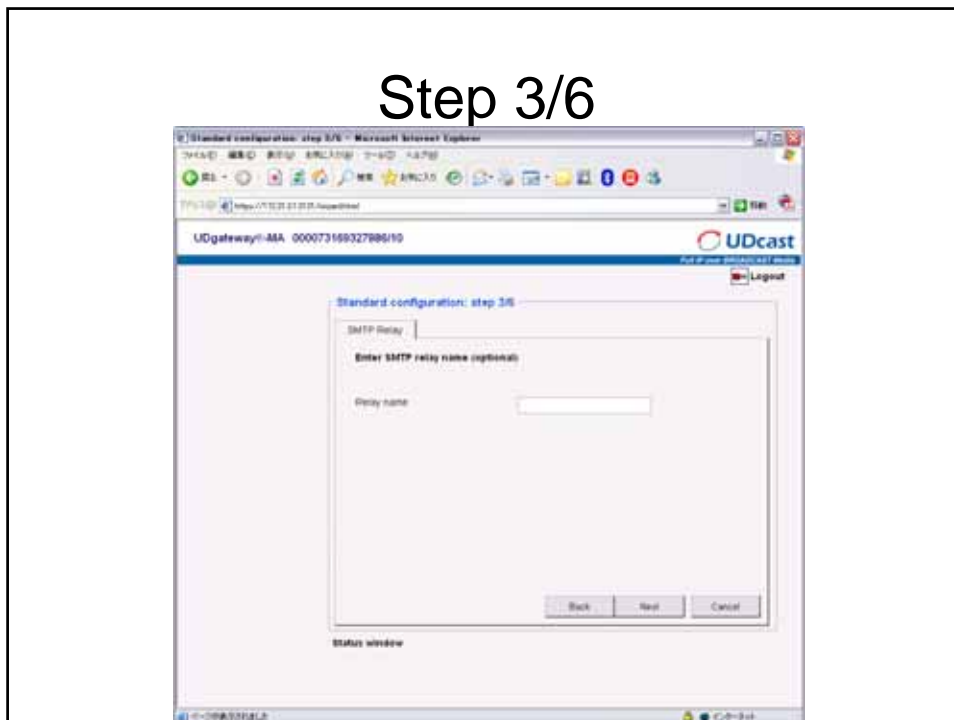
Step 1/6



Step 2/6



Step 3/6



Step 4/6

Standard configuration: step 4/6

UDstation IP address

This is the UDstation IP address. Your provider should have provided this administrative information.

UDstation IP address (optional)

Back Next Cancel

Status window

Step 5/6

Standard configuration: step 5/6

Provide Connection

Enter parameters (optional)

Phone number

Login

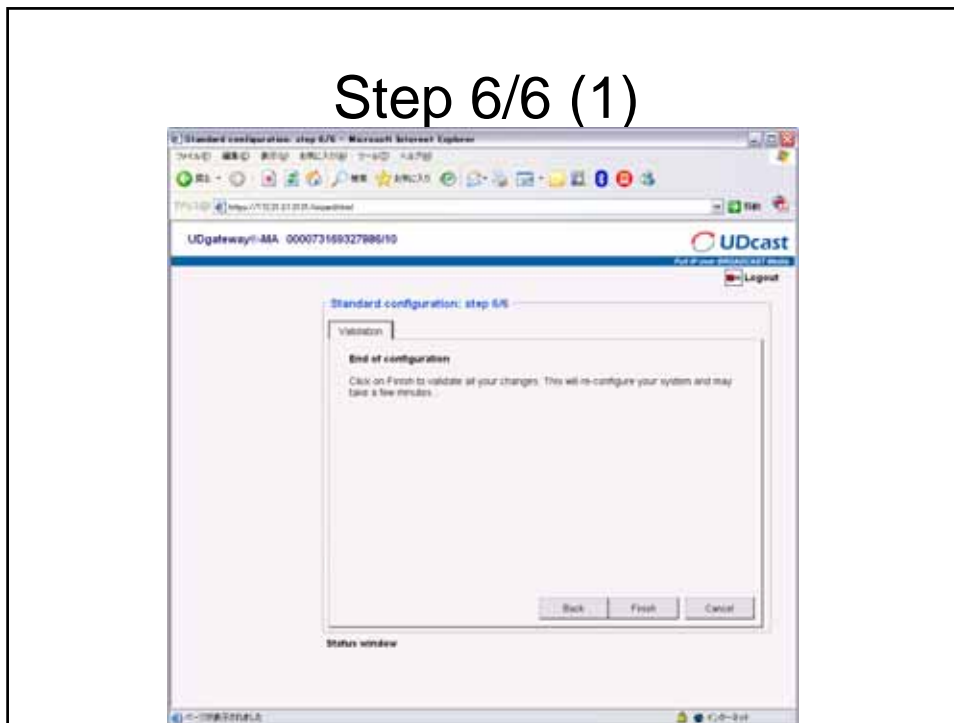
Password

Confirm password

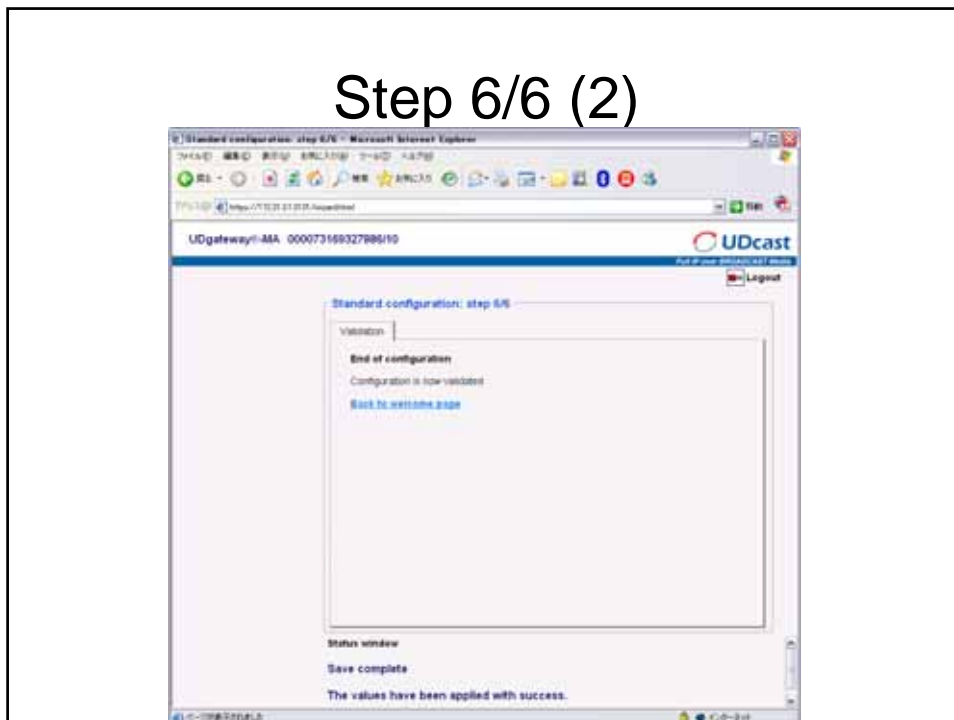
Back Next Cancel

Status window

Step 6/6 (1)

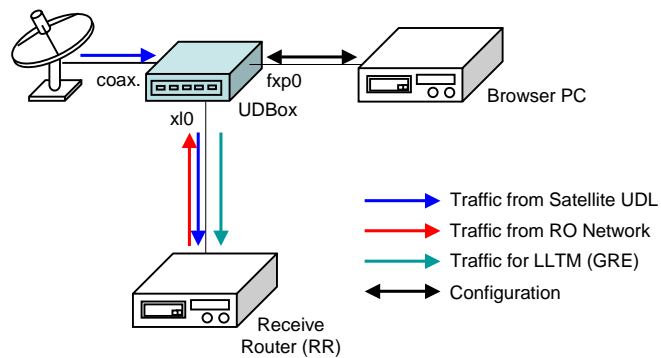


Step 6/6 (2)

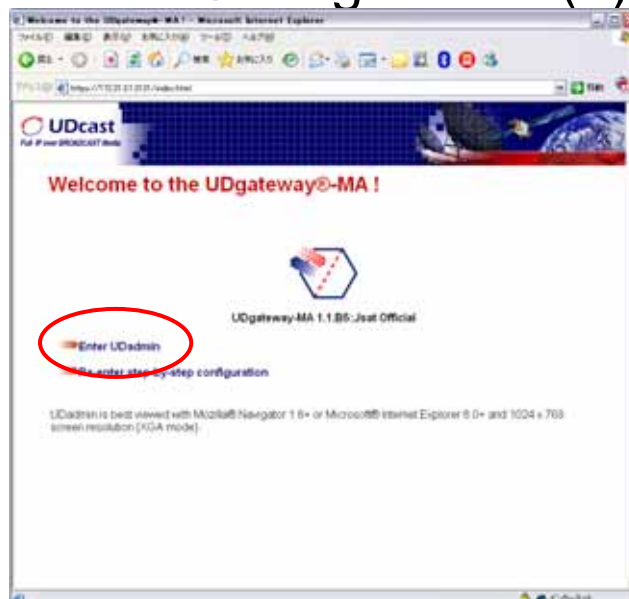


Network Installation

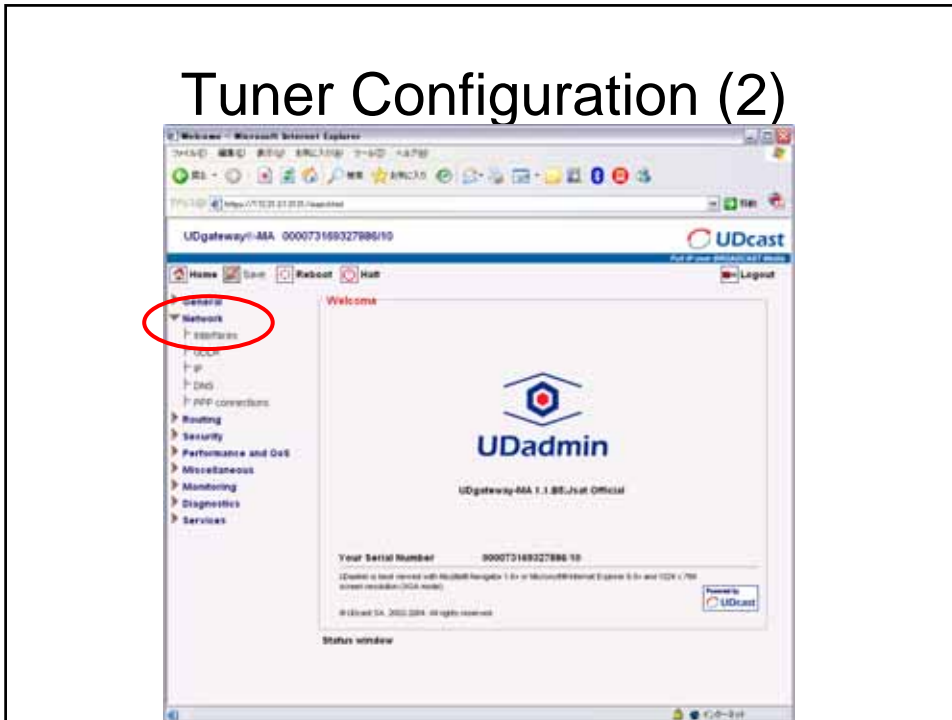
- Ethernet (Cross) Connection
 - UDBox (fxp0) <-> Browser PC
 - UDBox (xl0) <-> Receive Router



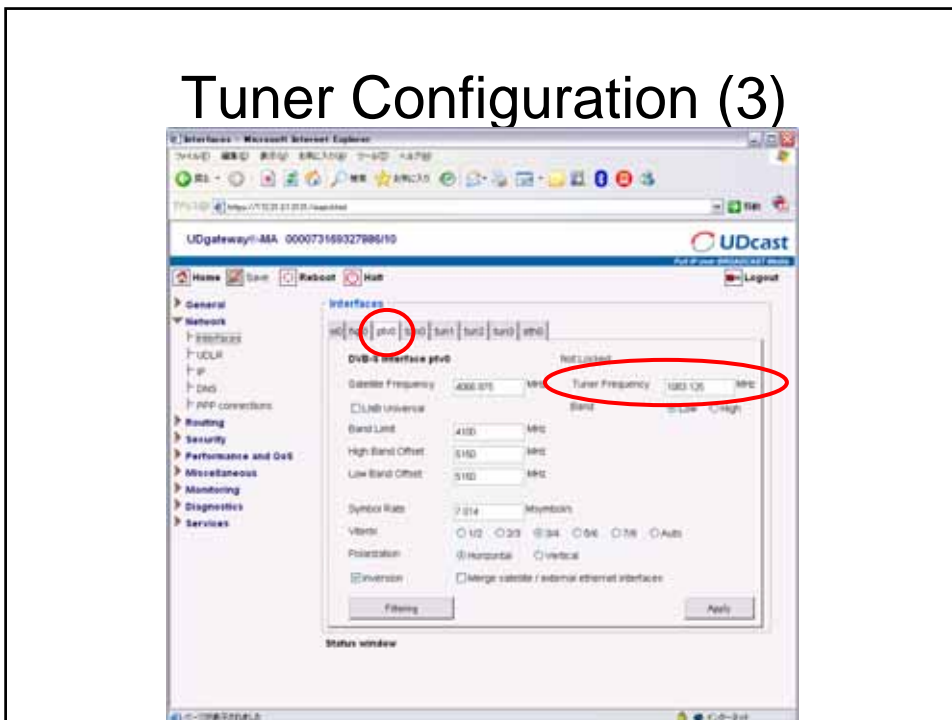
Tuner Configuration (1)



Tuner Configuration (2)



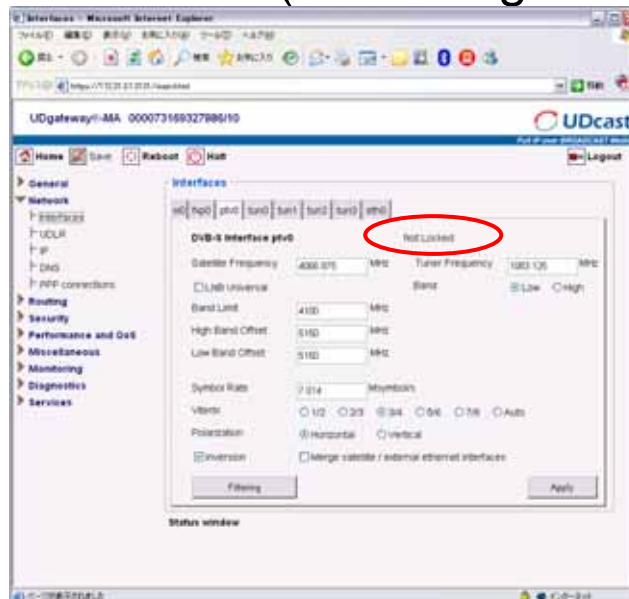
Tuner Configuration (3)



Tuner Configuration (4)

- AI3-dependent Information
 - Satellite Frequency
 - Symbol Rate
 - Viterbi
- Reference
 - http://www.ai3.net/op/documents/pdf/UAT_booking.pdf
- Tuner Frequency (MHz)
= LowBandOffset - Satellite Frequency

Status Check (Receiving Status)



Status Check (Connectivity 1-1)

```
# ping -c 5 202.249.25.193
PING 202.249.25.193 (202.249.25.193): 56 data bytes
64 bytes from 202.249.25.193: icmp_seq=0 ttl=64 time=431.293 ms
64 bytes from 202.249.25.193: icmp_seq=1 ttl=64 time=375.947 ms
64 bytes from 202.249.25.193: icmp_seq=2 ttl=64 time=399.950 ms
64 bytes from 202.249.25.193: icmp_seq=3 ttl=64 time=498.958 ms
64 bytes from 202.249.25.193: icmp_seq=4 ttl=64 time=707.978 ms

--- 202.249.25.193 ping statistics ---
5 packets transmitted, 5 packets received, 0% packet loss
round-trip min/avg/max/stddev = 375.947/482.825/707.978/119.917 ms
```

Status Check (Connectivity 1-2)

```
# traceroute 202.249.25.193
traceroute to 202.249.25.193 (202.249.25.193), 64 hops max, 44 byte
  packets
  1 sfc-udl-feed (202.249.25.193) 449.066 ms 373.419 ms 347.885
    ms
#
```

Status Check (Connectivity 2-1)

```
# ping -c 5 www.soi.wide.ad.jp
PING asari.soi.wide.ad.jp (203.178.138.99): 56 data bytes
64 bytes from 203.178.138.99: icmp_seq=0 ttl=251 time=524.415 ms
64 bytes from 203.178.138.99: icmp_seq=1 ttl=251 time=759.820 ms
64 bytes from 203.178.138.99: icmp_seq=2 ttl=251 time=529.004 ms
64 bytes from 203.178.138.99: icmp_seq=3 ttl=251 time=377.847 ms
64 bytes from 203.178.138.99: icmp_seq=4 ttl=251 time=382.820 ms

--- asari.soi.wide.ad.jp ping statistics ---
5 packets transmitted, 5 packets received, 0% packet loss
round-trip min/avg/max/stddev = 377.847/514.781/759.820/138.927 ms
```

Status Check (Connectivity 2-2)

```
# traceroute www.soi.wide.ad.jp
traceroute to asari.soi.wide.ad.jp (203.178.138.99), 64 hops max, 44
byte packets
 1 sfc-udl-feed (202.249.25.193) 587.958 ms 382.502 ms 368.694
ms
 2 sfc-orochi (202.249.25.225) 361.230 ms 399.536 ms 394.692 ms
 3 sfc-gate (202.249.25.1) 400.573 ms 384.539 ms 543.681 ms
 4 * gsr1.fujisawa.wide.ad.jp (202.249.26.114) 503.089 ms 728.543
ms
 5 pc8.fujisawa.wide.ad.jp (203.178.138.99) 514.706 ms 540.797 ms
388.465 ms
#
```

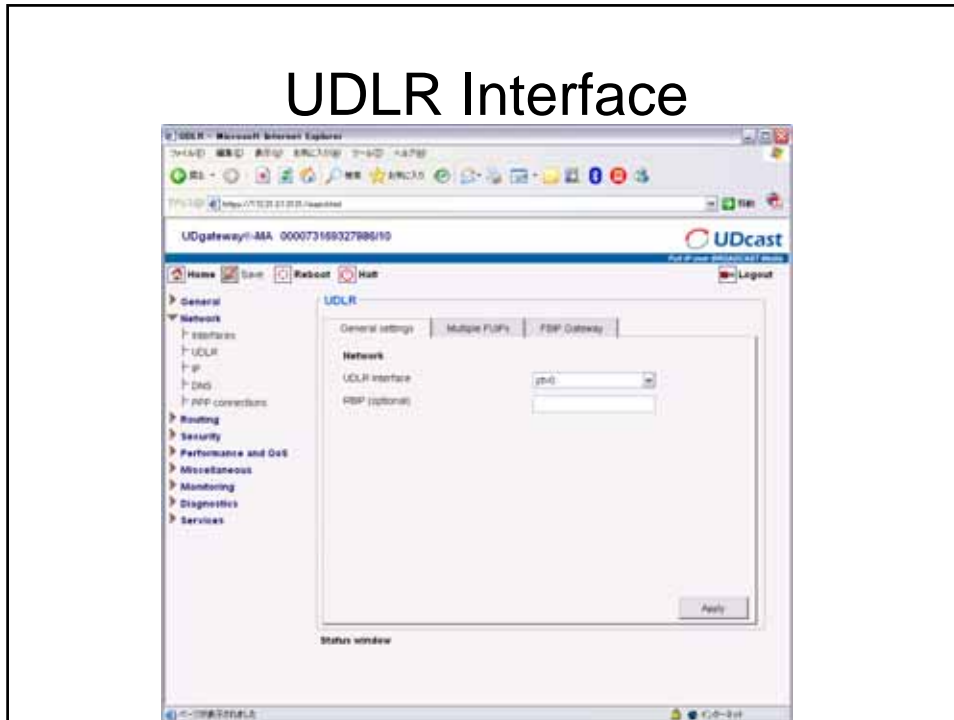
UDBox Operation

Maintenance

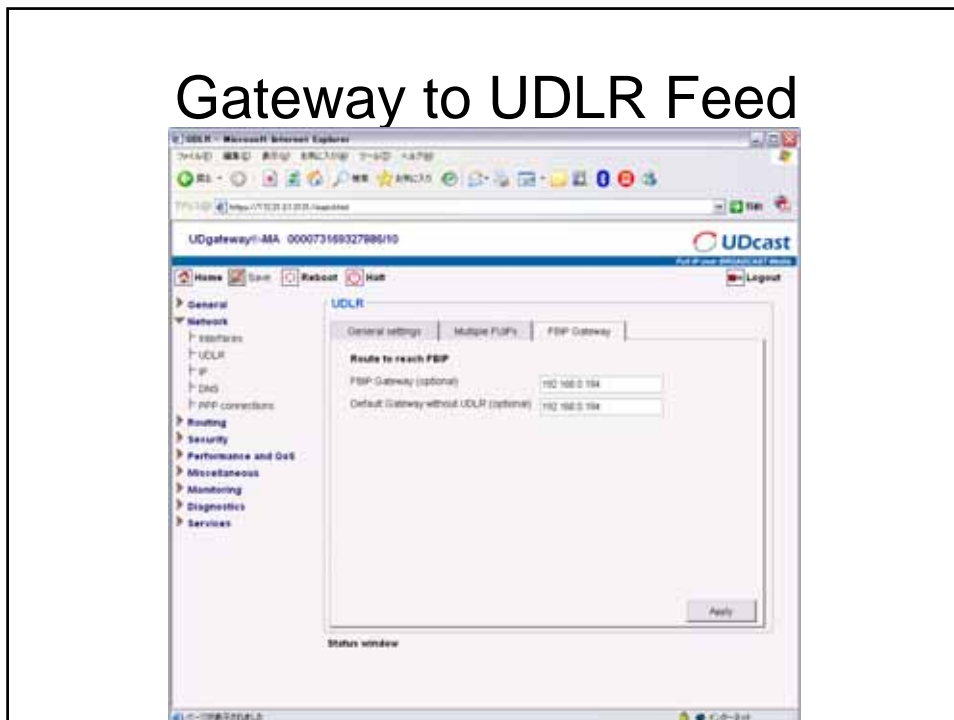
UDBox Maintenance

- Check UDBox Parameters
 - UDLR Interface
 - xl0, fxp0 Interface Address/Mask
 - Gateway to UDLR Feed
 - Routing Table
- Save / Reboot / Shutdown

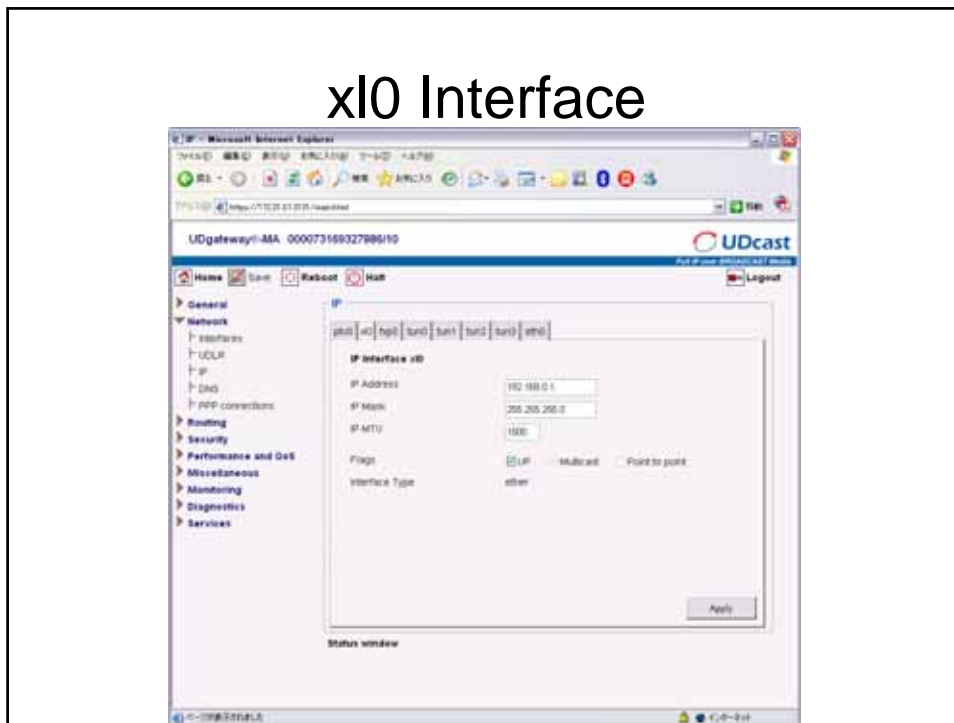
UDLR Interface



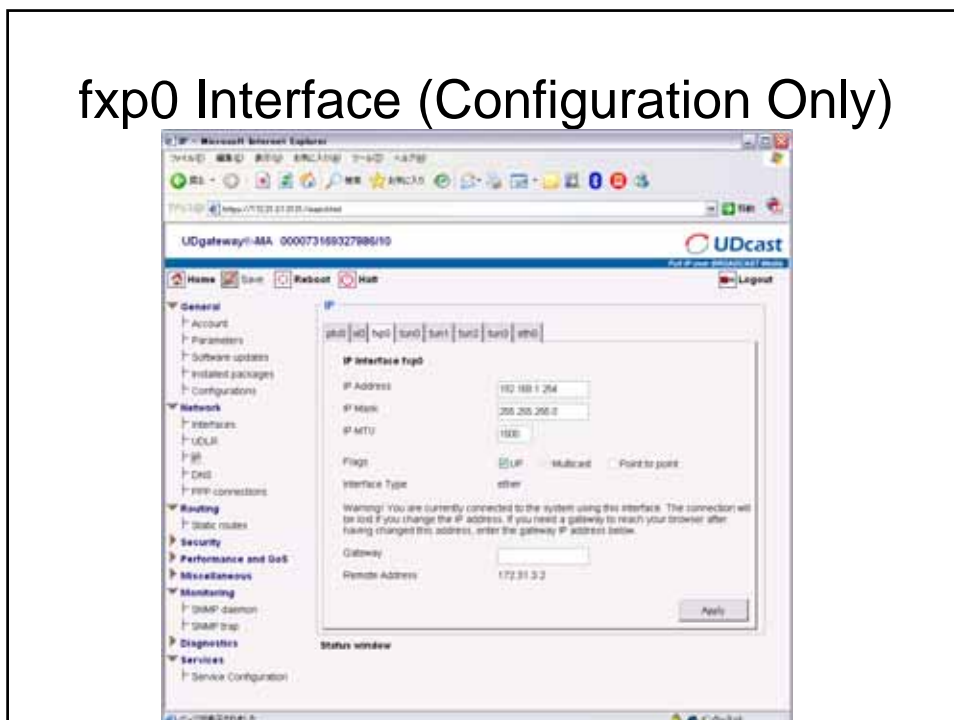
Gateway to UDLR Feed



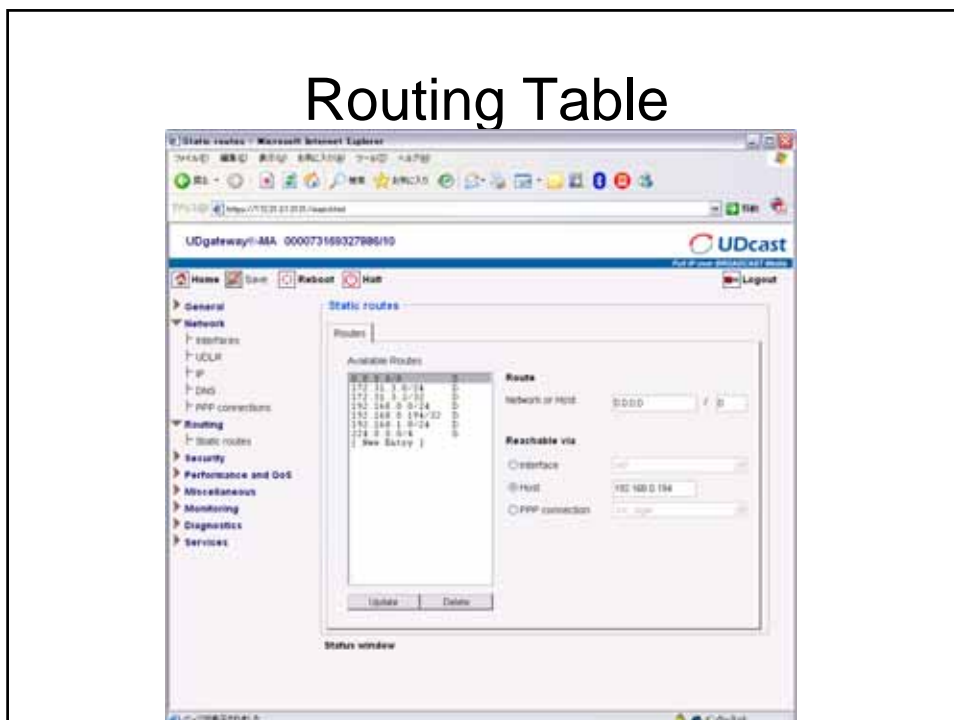
x10 Interface



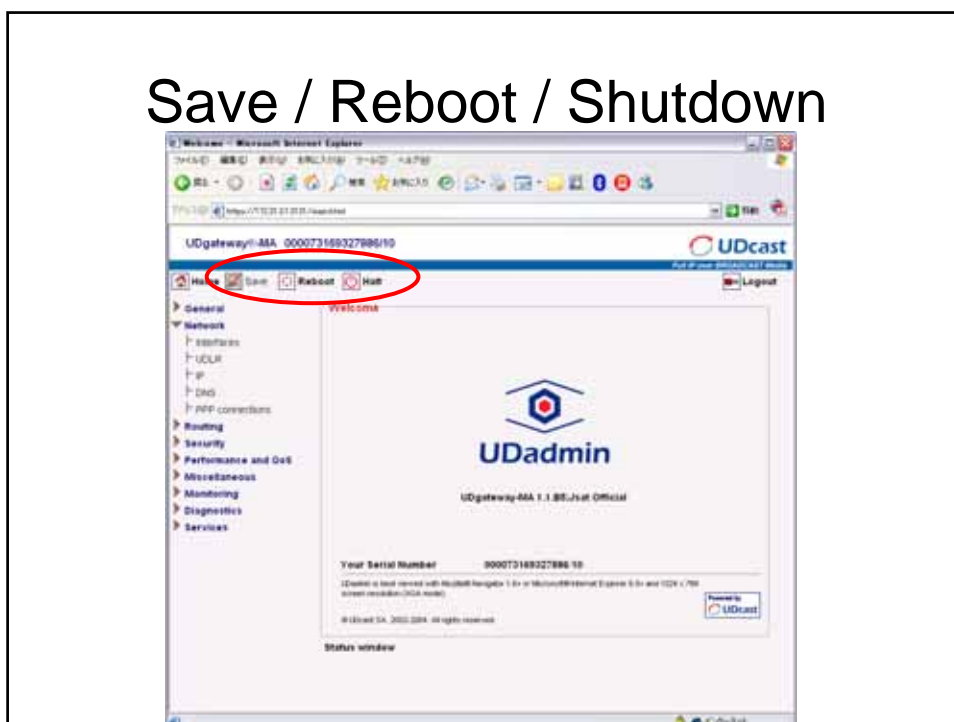
fxp0 Interface (Configuration Only)



Routing Table



Save / Reboot / Shutdown



UDBox Operation

Trouble Shooting

What could be a trouble?

- Somehow, RR is seem to be disconnected from the Internet
 - The receive status is “No signal” on UDBox.
 - The receive status is “Locked” on UDBox.

When the carrier could be lost? (1)

- SFC (Keio Univ) stops transmission because of maintenance or trouble
 - Announcement should be made to partners@asia.soi.wide.ad.jp
partners@ai3.net
 - Please wait for SFC to resume transmission

When the carrier could be lost? (2)

- Season of “Sun Interference”
 - Announcement should be made to partners@asia.soi.wide.ad.jp
partners@ai3.net
 - Check if SFC or your site is affected by the sun interference
 - http://www.jsat.net/satellite/sun/j3_en.html
 - Wait until sun interference finishes

When the carrier could be lost? (3)

- Hardware Trouble on
 - UDBox?
 - Your earth station?
- Make report to the operator ML!!
 - operators@asia.soi.wide.ad.jp

Any other troubles?

- Report any trouble to operator@asia.soi.wide.ad.jp
- UDBox operation is still to be established

Thank you very much