

Unified iSCSI Boot Property

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Theory of Operation

iSCSI boot properties are passed to Solaris kernel in different ways on x86 and sparc. IBFT, used on x86 is a piece of physical memory located by a magic signature. OBP properties on Sparc is a suite of kernel properties. Here we define the interface to unify these two kinds of interfaces into one structure, and therefore unify Solaris' behavior for iSCSI boot on x86 and sparc.

Glossary

iBFT, iSCSI Boot Firmware Table, defined in ACPI specification 3.0b.

Introduced Structures

```
/*
 * iSCSI boot initiator's properties
 */
typedef struct _ib_ini_prop {
    uchar_t *ini_name;          /* initiator's name */
    uchar_t *ini_chap_name;    /* name of chap sent to target, optional */
    uchar_t *ini_chap_sec;    /* secret of chap sent to target, optional */
} ib_ini_prop_t;

/*
 * iSCSI boot nic's properties
 */
typedef struct _ib_nic_prop {
    uchar_t nic_mac[6];        /* nic's mac */
    uchar_t nic_ip[16];       /* nic's ip, if non dhcp */
    uchar_t nic_gateway[16];  /* nic's gateway, optional */
    uchar_t nic_dhcp[16];     /* nic's ip, if dhcp */
    uchar_t nic_vlan[2];      /* nic's vlan, reserved, optional */
} ib_nic_prop_t;

/*
 * iSCSI boot target's properties
 */
typedef struct _ib_tgt_prop{
    uchar_t   tgt_ip[16];     /* target's ip */
    uint32_t  tgt_port;       /* target's port */
    uint64_t  tgt_boot_lun;   /* target's boot lun */
    uchar_t   *tgt_name;     /* target's name */
    uchar_t   *tgt_chap_name; /* name of chap sent to initiator, optional */
    uchar_t   *tgt_chap_sec; /* secret of chap sent to initiator, optional */
} ib_tgt_prop_t;
```

```
/*  
 * iSCSI boot properties  
 */  
typedef struct _ib_boot_prop{  
    ib_ini_prop_t  boot_init;  
    ib_nic_prop_t  boot_nic;  
    ib_tgt_prop_t  boot_tgt;  
} ib_boot_prop_t;
```