Note that the code related to architecture are all based on ia-64.

Memory

arch/ia64/asm/page.h

A head file contains some definitions and structures of os page, such as page size and pte(page table entry) structure.

Some definitions:

1. Use PAGE\_SHIFT define PAGE\_SIZE, the equation is 1 << PAGE\_SHIFT, than the PAGE\_MASK can be easily defined as ~(PAGE\_SIZE-1).
2. Package the unsigned long type into structures and creates pte\_t, pmd\_t as well as pgd\_t , the pud\_t can be available while CONFIG\_PGTABLE\_4 is defined.

typedef struct { unsigned long pte; } pte\_t;

typedef struct { unsinged long pmd; } pmd\_t;

#define pte\_val(x) ((x).pte)

There are also some type package definitions:

#define \_\_pte(x) ((pte\_t){(x)})

#define \_\_pmd(x) ((pmd\_t){(x)})