UEFI Basic Tutorial (XIV) - Use of Variable

Category columns: 15_Firmware Development   Article Tags: uefi   bios

1. Write source code

AI generated projects   登录复制

```
1    DataSize = sizeof (CSDNEnable);
2    Status = gRT->SetVariable (
3                    L"CSDNEnable",
4                    &gEfiCsdnEnableGuid,
5                    EFI_VARIABLE_NON_VOLATILE |
6                    EFI_VARIABLE_BOOTSERVICE_ACCESS |
7                    EFI_VARIABLE_RUNTIME_ACCESS,
8                    DataSize,
9                    &CSDNEnable
10                    );
11
12    ASSERT(Status);
13    DEBUG ((EFI_D_ERROR," [CSDN]: Setvariable CSDNEnable 0x%x.\n", CSDNEnable));
14
15    CSDNEnable = 0;
16    DataSize = sizeof (CSDNEnable);
17    Status = gRT->GetVariable (
18                    L"CSDNEnable",
19                    &gEfiCsdnEnableGuid,
20                    NULL,
twen                    &DataSize,
twen                    &CSDNEnable
twen                    );
twen    ASSERT(Status);
25
26    if (CSDNEnable) {
27      DEBUG ((EFI_D_ERROR, "[CSDN] CSDNEnable\n"));
28    }
```

收起 ∧

2. 编译 Generate EFI file & 运行 UEFI APP MyVariable.efi

You can also use the command under Shell `setvar` , `dmpstore` , to view the value of the newly created Variable.
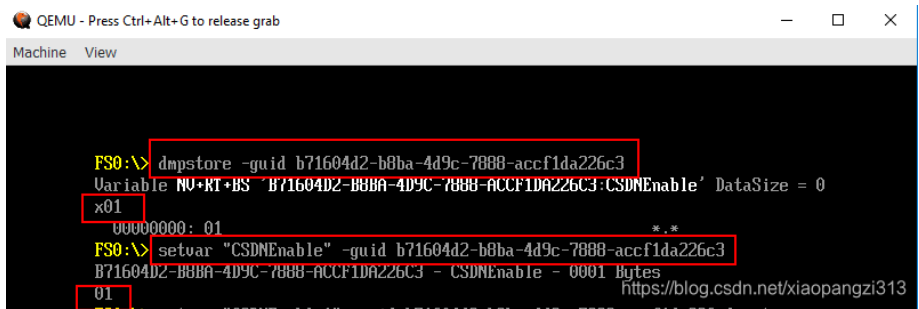
UEFI Variable can be used for communication between different drivers, which is a very good module sharing mechanism. Variable services are provided by BS, RT, and SMM. The corresponding services should be used in different phases. For example, in the SMM handler, you should use

```
1  Status = gSmst->SmmLocateProtocol ( &gEfiSmmVariableProtocolGuid, NULL, (VOID**)&mSmmVariable)
2  mSmmVariable->SmmSetVariable(...)
3  mSmmVariable->SmmGetVariable(...)
```

Otherwise it will fail.

PEI Phase is used as follows (注意PEI阶段没有setvariable 操作)

```
1   pPeiServices = (EFI_PEI_SERVICES**)(UINTN)Host->var.common.oemVariable;
2   //Read the EFI variable that stores TME Key
3   Status = (*pPeiServices)->LocatePpi (
4                     pPeiServices,
5                     &gEfiPeiReadOnlyVariable2PpiGuid,
6                     0,
7                     NULL,
8                     (void **)&pPeiVariable
9                     );
10  Status = pPeiVariable->GetVariable (pPeiVariable, L"CSDNEnable", &gEfiCsdnEnableGuid, NULL, &Size, (void *)&CSDNEnable);
11
```

收起 ∧

Linux   write variable cmd:

chattr-i/sys/firmware/efi/efivars/CSDNEnable-dc1254bf-b8bd-4dec-8878-acbf1da226c23>/dev/null;

printf"\x07\x00\x00\x00\x01\x00\x00\x00\x00\x00\x00">/sys/firmware/efi/efivars/CSDNEnable-dc1254bf-b8bd-4dec-8878-bccf1da226c3;

Linux dumpvariable cmd:

hexdump /sys/firmware/efi/efivars/CSDNEnable-dc1254bf-b8bd-4dec-8878-bccf1da226c3

Variable DEMO source code