

ê¶Œí•œ ê²€ì,¬

í<°í,æ ê¶Œí•œ ê²€ì,¬ (Tiki Permission Check, TPC): í<°í,æ ì,æì¹~ê°€ ì<æíŒí• ê²½ìš° ì •ë³´~ ì¶"ê°€ ì†Œìšæ.
2012 ë...,, 10ì>" ì'í>,, (ë³, íž~ì'ìš€ì— ì²"ë¶Œ€öœ) ë...ë!½í~ ìœ¼ëioœ ìi'ìž¬í•~ë©°, ë~í•œ Tiki10 ì— ê,°ëš¥ìœ¼ëioœì,,œ
í¬í•"ë".

1. ê°œìš"

Í<°í,æ ê¶Œí•œ ê²€ì,¬ëž€Â ë¬`ì—‡ì,ê°€?

ë§Œì½ í,°í,æ ì,æì¹ê´€ë|¬ìžì™€ tiki-check.php ê°€ ìæíŒí•œëææ©´, í<°í,æ ê¶Œí•œ ê²€ì,¬ë¼ì,¬ìš©í•ì—¬ ì>ì,œë²,ê°€ ìš"êµ¬ëíœ í•ëš" íŒŒì¼ìœìšæí...œ ê¶Œí•œì— ê´€í•œ ì¶"ê°€ ì¶ì,ë,ì—ì, ë°œê²¬í•ì—¬ ìœëŒëíœ ìž'ë™í•ë,ëì ì,æì •ëë,ëì ì,¬ìš©ë ì~ ìž`ìšµë<^ëæ. í<°í,æ ê¶Œí•œ ê²€ì,¬ì— ëŒŒí•œ ê¶Œí•œì€ ì~ë™ì ìœ¼ëíœ ê³ ì •ë ìž^ê±°ë,~ (FPT í¹ì€ SSH ë¼ í¶í•ê±°ë,~ ëææ¼, ì%~ ì'ê¼ë°©ìì, í¶í•ì—¬ ìž'ì€ ê°`ì~ íŒŒì¼ ì,ìti í•,ìš") í¹ì€ í¬í•ëœ ìšæí¬ë½ìš,ë¼ í¶í• ì~ ìž`ìšµë<^ëæ. í<°í,æ ê¶Œí•œ ê²€ì,¬ëš" í<°í,æ¼ ì>ì,œë², ì¶ì—ì,œ ìæí-%ìž^ê,° ìœ,í•ì—¬ ì-ë-æ íŒŒì¼ ìœìšæí...œ ê¶Œí•œì´ í•,ìš"í•œìš€ë¼ ìŒì•,ë,´ê,° ìœ,í•ì—¬ ì,¬ìš©ë ì~ ìž`ìšµë<^ëæ. ì ê¶Œí•œ ì,æì •ì€ ë...ìší• í•,ìš"ê°€ ì—‡ìšµë<^ëæ, ê,ë ‡ê,° ëŒë¬,ì— êŒí•ëš" êŒí•ê²Œì,œ ì>í•ìœê±°ë,~ í•,ìš"ì— ì¬ì•,í•€ ë³ì^ ë"±ê,%ì— ììí•ì—¬ ìœí•œì, ë" ë'ê±°ë,~ ëœ ë'ë,ëì ì, í¶í• ì~ ìž`ìšµë<^ëæ. í<°í,æ ê¶Œí•œ ê²€ì,¬ëš" í<°í,æ ìžì ìœ¼ëíœë¶í,° ë...ë½ì ì, íŒŒì¼ ê¶Œí•œ ë¬,ìœë"æì, ìŒì•,ë,´ëš"ë° ì,¬ìš©ë ì~ ìž`ìšµë<^ëæ. ì'ëŸ¬í•œ ê²½ìš°, íŒŒì¼ ê¶Œí•œì€ ì~ë™ì ìœ¼ëíœ ìì°ì ^ëë±°ë,~ ëææ¼, í"„ëíœì ìš,ì— ìì^í•œ ì-ë- í•œ ë°©ìì, í¶í•ì—¬ ìì°ì ^ëì-ì¼ë§Œ í•©ë<^ëæ. °í,æ¼ ì,æì¹í•ëš"ë° ì •ë³'ë¼ ì,¬ìš©í•ê,°ì— ê°€ìžæ íž,ë|¬í•œ ë°©ìì€ setup.sh ì~ì •ì, í¶í•ëš" ê²fiž...ë<^ëæ. (ê³ ì¶œìœ ì~ì •)

ì,¬ì,,ì•ì~ëœ êŒŒí•œÂ ëª"ë,

ë<æì-í•œ ì>¹ì,,œë²,,ì,,æì • ë° ì,¬ëi€ëiœ ì,í•~ì—¬, TPCëŠ" ë<æì-í•œ ì,¬ì,,ì•ì~ëœ ëª"ë,ë"æì,,ì œê³µí•~ì—¬ ì,,æì¹~ê°€
ê,ë"æê³¼ ìž'ë™ í• ìš€ ì—¬êŒŒë¥¼ í™ •ì,í•~ë,,ëi í• ©ë^ë<æ. ì~¬ë°"ë¥, ëª"ë,(ë"æ)ì' ì•Œë æìš€ê²Œë~ë©', ìì^í•œ
ëª...ë ¹ì-¹™ € í•"ê»~ ì,,æì¹~ ìš¼ë!íš,ë¥¼ ì<æì-%oí•~ëš"ë° ì,¬ìš©ë ì~ ìž^ìšµë^ë<æ. ë,ìž¥ êŒŒí•œ ëª"ë, (2012-11-11
ëŒŒí,,° íš"ë ¥ìž^ìŒ)

- insane
- mixed
- morepain
- moreowrry
- pain
- paranoia
- paranoia-suphp
- risky
- sbox
- worry

ì%o~ ì'ê¼ ì—†ë<æë©', êŒŒí•œì€ FTP í~¹ì€ ë<æë¥, ë°©ìì— ì'í•~ì—¬ ì,,æì •ë~ì-¹¼ í• ©ë^ë<æ. ì'ëš" ëšžì€ ìž'ì—...ì' ë
ì~ë,, ìž^ìšµë^ë<æ, ê, ììœ ëš" ì-ë-æ íŒŒì¼ê³¼ ì,,œë,Œë""ë %oít ë|¬ë"æì' ì"°ê,°ê°€ëš¥í• ì¼í•~ìš€ëšŒ,
ì"°ê,°ê°€ëš¥í• í•,,ìš"ê°€ ì—†ëš" ê²fë"æì€ ì"°ê,° êŒŒí•œì' ì¼ì-ìš€ë©' ì^ë~ê,° ë•Œë¬,ìž...ë^ë<æ. ììfi ì'ë¼ë©',
ì'ëŸ¬í•œ ì,,æì¹~ë"æ (ì^: ê³µìœ í,ìšæíŒ...)ì' SuPHP ì>¹ì,,œë²,, ë³'ì,ë¥¼ ì,¬ìš©í•~ì—¬ êŒŒí•œì,, ìœ ìš©í•œ
ë<ê³,,ê¹Œìš€ (ë¹,,ëi ì'ëi ì ìµœì ìfíœê°€ ì•,,ë<ìš€ë¼ë,,) ì,,æì •í•~ëš" ê²fi' ìì%o½ê²Œ ë~ëš" ê²fiž...ë^ë<æ.

ì-´ë””ì—ì,,œ êµ¬í• ì^~Â ìž^ë,~?

°í,æ ê¶œí•œ ê²€ì,¬ěš” íš,ë í¬ì— ì œê³µë~ë©° ë...ë!½í~•ìœ¼ëioœ ë<æš´ëioœ“œ ë ì~ ìž^ìšµë<^ë<æ. Tiki10 ë,´ë¶€ì—ë
ì œê³µë©ë<^ë<æ (2012-10-22 ì´ì>„ë¶€í„°). ë...ë!½í~• ë²,,ì „ì€ í°í,æì~ ê·, ì-´ë- í•œ ë²,,ì „ê³¼ë,, ìž´ë™ì,, í• ê²fìž...ë<^ë<æ
(í~„ìž¬ ì~^ì, ìì€ ìž´ë™ì,, í• ì•¼í•œë<æê³ ë³´ê³ ìž^ìšµë<^ë<æ) ë³, ìž~ì´ìš€ì~ í•~ë<¬ì—, ì•œíœœ ë²,,ì „ì´ ì²“ë¶€ë~ì-´
ìž^ìšµë<^ë<æ.

ê°€ìž¥ ìµœì< ë²,,ì „ì~ ì½”ë“œěš” ë<æìœ ìœ,,ì~ì— ìž^ìšµë<^ë<æ:

- <https://svn.code.sf.net/p/tikiwiki/code/trunk/permissioncheck/>
- <https://svn.code.sf.net/p/tikiwiki/code/branches/11.x/permissioncheck/>
- <https://svn.code.sf.net/p/tikiwiki/code/branches/10.x/permissioncheck/>

2. í<°í,ꝛ ê¶Œí•œ ê²€ì,¬ í™ œì,,±í™ ” ë° ë¹,,í™ œì,,±í™ ” Â í•~ê,°

ìꝛ'ìš"í•œ ë¬,ì œëš" í<°í,ꝛ ê¶Œí•œ ê²€ì,¬ë¼¼ í™ œì,,±í•~ ë° ë¹,,í™ œì,,±í™" í•~ëš" ê²fiž...ë^ë<ꝛ. í•,,ìš"í•œ ì •ë³'ë¼¼
ì•~ë"í-^ìœ¼ë©´, ë¹,,í™ œì,,±í™"í•~ëš" ê²fi,, ê°•ë ¥ ì¶"ì²œí•©ë^ë<ꝛ, ì'ëš" ë²ë²ë² í•~ìœ,,ë""ë %oí,,°ë|¬ë"ꝛì´ í...Œìšꝛíš,
ë²©ì ìœ¼ëioœ ì,,ì¬ ì"°ê,° ê°€ëš¥í•~ê²Œ ì,,ꝛì •ë~ë©° íŒŒ¼ë"ꝛì~ ìŒìœ ê¶Œ (*user/group*) ì' ëŒ€ìꝛ'ì¬ê²Œ
ë...ì¶œë~ê,° ë•Œë¬,ìž...ë^ë<ꝛ (í•~ìš€ëšŒ, ì>¹,,œë²,,ì ì,,ꝛì •ì¬ ë"°ë¼¼, ê°€ëš¥í•~ë<ꝛë©´ htaccess ë³'í,,ë¼¼ ì,¬ìš©í•
ì~ë,, ìž^ìœ¼ì<ꝛ ê²fiž...ë^ë<ꝛ).

2.1. í<°í,æ ê¶Œí•œ ê²€ì,¬ë¥¼

ì%oo ãì—ì,,œÂ ì`ìš ©

sh (í~¹)€ bash, dash) ì™ € ê°™ì€ ì%oo ãì,, ì,¬ìš © í• ãì—¬ í<°í,æ ë¬,ì,,œ ë£“íš,ì— ìž^ëš” `prepare_permissioncheck.sh`
ìšæí¬ë!½íš,ë¥¼ ì&æí-%oo í• ãì<œì~æ.

2.1.1. $\text{S}^1 \times \mathbb{R}^2 \rightarrow \mathbb{R}^3$, $\hat{e}_1, \hat{e}_2, \hat{e}_3$ •

$\langle \hat{e}_i, \hat{e}_j \rangle = \delta_{ij}$, $\hat{e}_i \cdot \hat{e}_j = \delta_{ij}$

```
chmod 600 prepare_permissioncheck.sh
```

2.1.2. htaccess è¶Æí•œÂ ì,,¸ì •

í<°í,¸ì~ ë¬,ì,,œ ë£"íŠ,ì— ìž^ìÆ:

```
chmod 644 permissioncheck/.htaccess
```

ë§Æì•½ **.htaccess** ì' ìì ìž¬í•~ì§€ë§Æ ì>¹ì,,œë²,,ì—ì,,œ ì½ì,, ì^~ ì—†ë<¸ë©', ë¬,ì œê°€ ë°œìfí• ì^~ë,, ìž^ìŠµë<^ë<¸.
ì'ëŠ" í<°í,¸ ê¶Æí•œ ê²€ì,¬ê°€ ì%~ ìŠ¸í¬ë!½íŠ,ì— ì'í•~ì—¬ í™œì,,±í™" í~¹ì€ ë¹,,í™œì,,±í™" ë ë•Æëš^ë<¸
ì§,,í-%œë©ë<^ë<¸. ê¬,ëŸ¬ë¬ëïœ ëÆ€ë¶ë¶,,ì ê²½ìš°, ì^~ë™ìœ¼ëïœ ì§,,í-%œí• í•,,ìš"ê°€ ì—†ìŠµë<^ë<¸.

2.1.3. `sudo`, `visudo` → `sudo` `visudo` „

`sudo`, `visudo` → `sudo` `visudo` „

```
sh prepare_permissioncheck.sh enable
```

2.1.4. `prepare_permissioncheck.sh` disable

í<°í,πĩ ë¬,ì,,œ ë£“íŠ,ì— ìž^ìŒ:

```
sh prepare_permissioncheck.sh disable
```

2.2. í<°í,æ ê¶Œí•œ ê²€ì,¬ë¥¼ FTP ë¥¼ ítμί•~ì—¬Â ì,¬ìš©

ì%~ ì'ê¼ì' ì—tì' ê¶Œí•œì,, ì,,xì •í•~ěš" ê²fi€ ì%¬ìš' ê²fi' ì•,,ë<™ ë<^ë<x. ì§€ì— íŒŒ¼ ê¶Œí•œì,, ì,,xì •í•~ê³
ì—...ëioë"œë¥¼ í•~ê±°ë,~ FTPë¥¼ íτμί•~ì—¬ íŒŒ¼ì,, ì,,xì •í• ì^~ ìž^ìšμë<^ë<x (ë' ê²½ìš° ëª"ë': **enable/disable**).

ì¶"ê°€ëioë í<°í,æ ê¶Œí•œ ê²€ì,¬ë¥¼ í™ œì,,±í™" í•~ë xë©' `permissioncheck/yes.bin` ë¥¼
`permissioncheck/permission_granted.bin` ëioë ë³μì,¬í•~ê³ **ë¹,,í™ œì,,±** í•~ë xë©' `permissioncheck/no.bin` ë¥¼
`permissioncheck/permission_granted.bin` ëioë ë³μì,¬í•~ì—¬ì¼ í•©ë<^ë<x. (ë' ê²½ìš° ëª"ë': ê·, í>, FTP ëioë ë<xìŒì,,
ì—...ëioë"œ í•©ë<^ë<x `permissioncheck/permission_granted.bin`).

2.2.1. FTP chmod & itmi•œ

1/4ë°~Â ì,,xì •

```
chmod 755 permissioncheck
chmod 644 permissioncheck/check.php
chmod 644 permissioncheck/functions.php.inc
chmod 600 permissioncheck/.htaccess
chmod 644 permissioncheck/.htaccess if it exists
chmod 600 permissioncheck/.htpasswd
chmod 644 permissioncheck/index.php
chmod 444 permissioncheck/no.bin
chmod 444 permissioncheck/permission_print.php.inc
chmod 644 permissioncheck/permission_granted.bin
chmod 644 permissioncheck/permission_granted.php.inc
chmod 644 permissioncheck/usecases.php.inc
chmod 644 permissioncheck/usecases.txt
chmod 444 permissioncheck/yes.bin
```

htaccess êŒí•œ ì,,xì •

ëŒì•½ í<°í,x êŒí•œ ê²€ì,-ê°€ *permissioncheck/* ë, 'ëŒì~ ê, °ìì~ **.htaccess** ì- ì~í•~ì- ñ ë³'í~_ëœë<xë©', í<°í,x

ë- ,ì,,œ ëf"íŒ,ì- ë<xìŒì,, í™ •ì,í•~ì<œì~x:

```
chmod 644 permissioncheck/.htaccess
```

ëŒì•½ **.htaccess** ê°€ ìì'ž-í•~ìŒëŒŒ ì>ì,,œë²,,ì-ì,,œ ì½ì-'ë"xì¼ ì^~ ì-†ë<xë©', ë- ,ì œê°€ ë°œìí• ì^~ë,,
ìž^ìŒµë^ë<x.

2.2.2. via FTP chmod

í†µí• ~ì—¬Â í™ œì,,±í™ ”

permissioncheck/new_htaccess (ìž,,ì~ ë, `ìš©ìœ¼œìœ) ìfi,,±, permissioncheck/yes.bin ë¼¼

ermissioncheck/permission_granted.bin ì— ë³µì,¬í•~ê³ ë~ ë<α ì—...ëìœë“œ, ë<αìœê³¼ ê°™ì´ FTP ì,,œë²,,ì—ì,,œ íœœì¼

ê¶œí•œ ë³€ê²½:

```
chmod 644 permissioncheck/create_new_htaccess.php
  chmod 777 permissioncheck/insane
    chmod 777 permissioncheck/insane/check.php
      chmod 700 permissioncheck/mixed
        chmod 660 permissioncheck/mixed/check.php
          chmod 705 permissioncheck/morepain
            chmod 606 permissioncheck/morepain/check.php
              chmod 705 permissioncheck/moreworry
                chmod 604 permissioncheck/moreworry/check.php
                  chmod 666 permissioncheck/new_htaccess
                    chmod 701 permissioncheck/pain
                      chmod 606 permissioncheck/pain/check.php
                        chmod 770 permissioncheck/paranoia
                          chmod 600 permissioncheck/paranoia/check.php
                            chmod 701 permissioncheck/paranoia-suphp
                              chmod 600 permissioncheck/paranoia-suphp/check.php
                                chmod 775 permissioncheck/risky
                                  chmod 664 permissioncheck/risky/check.php
                                    chmod 701 permissioncheck/worry
                                      chmod 604 permissioncheck/worry/check.php
```

2.2.3. FTP chmod

íτμί• ~ì—¬Â ë¹ „í™ œèì „±í™ ”

permissioncheck/no.bin ë¼ permissioncheck/permission_granted.bin ëœ ë³μì,¬í•ê³ ì—...ëìœë“œ, FTP ì„œë²„ì—ì„œ

ë<αìœê¼ ê°™ì´ ê¶œí•œ ì„αì • ë³œê½:

```
chmod 000 permissioncheck/create_new_htaccess.php
  chmod 700 permissioncheck/insane
    chmod 600 permissioncheck/insane/check.php
      chmod 700 permissioncheck/mixed
        chmod 600 permissioncheck/mixed/check.php
          chmod 700 permissioncheck/morepain
            chmod 600 permissioncheck/morepain/check.php
              chmod 700 permissioncheck/moreworry
                chmod 600 permissioncheck/moreworry/check.php
                  chmod 600 permissioncheck/new_htaccess
                    chmod 700 permissioncheck/pain
                      chmod 600 permissioncheck/pain/check.php
                        chmod 700 permissioncheck/paranoia
                          chmod 600 permissioncheck/paranoia/check.php
                            chmod 700 permissioncheck/paranoia-suphp
                              chmod 600 permissioncheck/paranoia-suphp/check.php
                                chmod 700 permissioncheck/risky
                                  chmod 600 permissioncheck/risky/check.php
                                    chmod 700 permissioncheck/worry
                                      chmod 600 permissioncheck/worry/check.php
```

3. ê ¶ Œ í • œ ê ° œ ì š ” : Â ì ~ ^ ì œ

<http://example.org/permissioncheck/>

<http://demo.tiki.org/pd/permissioncheck/>

<http://demo.tiki.org/10x/permissioncheck/>

<http://demo.tiki.org/trunk/permissioncheck/>

3.1. í<°í,ꝥ êŕŒí•œ ê²€ì,¬Â ì,¬ìš©í•~ê,°

žì< ì~ í<°í,ꝥ ì,ꝥì¹~ ê²½ëioe /permissioncheck/ ë¥¼ ë°©ë¬,í•~ë©´ TPC ë©"ì, íž~ì'ìš€ë¥¼ ë³'ê²Œ ë ê²fiž...ë^ë<ꝥ. ìœ,,ì~
ì~^ì œè—ì,,œ example.com ë,,ë©"ì,ì,, ê•€í•~ì~ ë,,ë©"ì,ìœ¼ëioe êμ²'í•~ì<œì~ꝥ. íž~ì'ìš€ê°€ ì'ê²fi€ ë¹,,í™ œè,,±í™ "
~ì- ìž^ìšμë^ë<ꝥ ë¼ê³ ëší•~ë©´, í™ œè,,±í™ "ë¥¼ í•'ì£¼ì... "ì•¼ í•©ë^ë<ꝥ. ì'ëŸ¬í•œ êŕŒí•œë"æì— ëŒ€í•~ì—¬ ëª"ë"
êŕŒí•œ ëª"ë, ì,¬ìš©ìž, ê•,ëf¹ ë° íŒŒì¼ êŕŒí•œ ì' ë³¬—¬ì•¼ í•~ë©°, ì' ëª"ë,ì' ìž'ë™ì,, í• ê²fi,ìš€ ì—¬ëŕŒì—
ëŒ€í•œ ìžŒíš,ë,, ë³¬—¬ì•¼ í•©ë^ë<ꝥ. ìž'ë™ì,, í• ê²f ê°™ì€ ëª"ë,ëª...ì,, ê,°ëíí•'ë'ì<œì~ꝥ. í>,ì— í•,,ìš"í•~ê²Œ ë
ê²fiž...ë^ë<ꝥ

4. í<°í,ꝥ ê¶Œí•œ ê²€ì,¬ëiœë¶€í,,°ì~
ì•ë³´Âì,¬ìš©í•~ê,°

4.1. $\hat{A} \sim \frac{1}{4} \hat{e}$

$\langle \text{í}, \text{x} \text{ é } \text{í} \text{š} \text{, } \text{ë} \text{''} \text{ë} \text{ } \text{‰} \text{í} \text{,} \text{°} \text{ë} \text{!} \text{—} \text{ë} \text{í} \text{œ} \text{ } \hat{\text{e}} \text{°} \text{€} \text{ì} \text{,} \text{œ} \text{ } \text{ì} \text{,} \text{x} \text{ì} \text{^} \text{~} \text{ } \text{ì} \text{š} \text{x} \text{í} \text{—} \text{ë} \text{!} \text{ } \frac{1}{2} \text{í} \text{š} \text{, } \text{ë} \text{¥} \text{ } \frac{1}{4} \text{ } \text{ì} \text{ž} \text{'} \text{ë} \text{™} \text{í} \text{•} \text{ } \hat{\text{e}} \text{ } \text{é} \text{ } \text{f} \text{ } \text{é} \text{ } \text{é} \text{ } \frac{1}{4} \text{ } \text{ë} \text{ } \text{ } \text{í} \text{'} \text{é} \text{š} \text{''} \text{ } \text{ë} \text{ } \text{''} \text{ë} \text{, } \text{ë} \text{ } \text{''} \text{...} \text{ } \text{ì} \text{x} \text{' } \text{í} \text{•} \text{ } \text{~} \text{ë} \text{,} \text{~} \text{ì} \text{™} \text{€} \text{ } \text{í} \text{•} \text{ } \text{''} \text{é} \text{ } \text{»} \text{''}$
 $\text{ì} \text{x} \text{í} \text{—} \text{‰} \text{í} \text{•} \text{~} \text{ì} \text{ì} \text{ì} \text{œ} \text{ì} \text{~} \text{x} \text{:}$
`sh setup.sh $modelâ†µ`
 $\text{—} \text{—} \hat{\text{e}} \text{, } \text{°} \text{ì} \text{,} \text{œ} \text{ } \text{\$model} \text{ } \text{ë} \text{ } \frac{1}{4} \text{ } \text{ì} \text{œ} \text{,} \text{ì} \text{—} \text{ } \text{ì} \text{ì} \text{—} \text{'} \text{é} \text{†} \text{''} \text{ì} \text{œ} \text{ } \frac{1}{4} \text{ì} \text{ } \hat{\text{e}} \text{ } \text{ } \text{f} \text{ } \text{ì} \text{œ} \text{ } \frac{1}{4} \text{ë} \text{í} \text{œ} \text{ } \hat{\text{e}} \text{ } \text{ } \text{ } \text{ì} \text{ì} \text{ì} \text{œ} \text{ì} \text{~} \text{x} \text{. } \text{ì} \text{' } \text{ë} \text{ } \text{''} \text{ë} \text{, } \text{ì} \text{' } \text{ì} \text{—} \text{—} \text{ì} \text{,} \text{ } \text{í} \text{ž} \text{ } \text{ì} \text{ž} \text{' } \text{ë} \text{™} \text{í} \text{•} \text{~} \text{ì} \text{š} \text{€} \text{ } \text{ì} \text{•} \text{š} \text{é} \text{š} \text{''} \text{ë} \text{x} \text{ë} \text{ } \text{°} \text{'}$
 $\text{ë} \text{x} \text{ë} \text{¥} \text{, } \hat{\text{e}} \text{ } \text{ } \text{f} \text{ } \text{ì} \text{œ} \text{ } \frac{1}{4} \text{ë} \text{í} \text{œ} \text{ } \text{ì} \text{œ} \text{ë} \text{,} \text{í} \text{•} \text{~} \text{ì} \text{ì} \text{ì} \text{œ} \text{ì} \text{~} \text{x} \text{. } \text{ì} \text{ž} \text{' } \text{ë} \text{™} \text{í} \text{•} \text{~} \text{é} \text{š} \text{''} \text{ } \text{ë} \text{ } \text{''} \text{ë} \text{, } \text{ì} \text{' } \text{ì} \text{—} \text{—} \text{†} \text{ë} \text{x} \text{ë} \text{ } \text{°} \text{'}, \text{í} \text{•} \text{~} \text{ë} \text{,} \text{~} \text{ì} \text{''} \text{ } \text{°} \text{ } \text{ë} \text{ } \text{ } \hat{\text{e}} \text{ } \text{ } \hat{\text{e}} \text{ } \text{ } \text{ì} \text{,} \text{—} \text{ì} \text{,} \text{ } \text{ì} \text{ } \text{•} \text{ì} \text{~} \text{ë} \text{œ}$
 $\text{ë} \text{ } \text{''} \text{ë} \text{, } \text{ë} \text{''} \text{x} \text{ì} \text{,} \text{ } \text{ì} \text{œ} \text{ë} \text{,} \text{í} \text{•} \text{' } \text{ë} \text{ } \text{ } \text{ } \text{ì} \text{œ} \text{é} \text{ } \hat{\text{e}} \text{ } \text{ } \text{ } \hat{\text{e}} \text{ } \text{ } \text{ } \frac{1}{4} \text{ë} \text{ } \frac{1}{4} \text{ } \text{ì} \text{š} \text{€} \text{ } \frac{1}{4} \text{œ} \text{ë} \text{ } \text{ } \text{ } \text{ì} \text{ì} \text{ì} \text{œ} \text{ì} \text{~} \text{x}$

5. `setup.sh` `~` `^` `ä` `...` `ë` `1` `-` `'`

5.1. ì¼ë°~Â ë^a...ë 1ì-´

- default
- menu
- nothing

5.2. à „ítμÂ ë^a...ë 1ì-´

- fix
- open

5.3. ì,¬ì „ì •ì~ëœÂ ë^a“ë,ë“x

- insane
- morepain
- moreworry
- pain
- paranoia
- paranoia-suphp
- risky
- sbox
- worry

5.4. ë ¸ ì ¸ ¸ ì ì ° ì ^ ê ° € ë Š ¥ í • œ
ê ¶ Œ í • œ Â ë ¶ € ë ¶ ¸ ë “ x

5.4.1. à „ì²´ í<°í,Â íŠ,ë|¬

- gmr
- gmw
- gmx
- gpr
- gpw
- gpx
- omr
- omw
- omx
- opr
- opw
- opx
- umr
- umw
- umx
- upr
- upw
- upx

5.4.2. íŠ¹î[~] ë””ë %ooí,,°ë|¬ (î>¹î,,œë²,, ì”°ê,°Â ì ‘ê·1/4)

- sdgmw
- sdgpw
- sdomw
- sdopw
- sdumw
- sdupâ†µ

6. ì,¬ìš©ìž ìš€ì •ëœ ì,¬ìš©Â ì¼€ì `ìšx

ê²½ê³ : ì`ë³`ìžì—ê²œëš” ê¶œìž¥ë`ìš€ ì•šìšµë<^ë<x

ìž,,ì`ì ì,¬ìš©ìž ì¼€ì `ìšxê°€ ì¶”ê°€ë ì`ìž`ìšµë<^ë<x. ì`ëš” 3ë`ê³,,ë¼ í¶í•`ì— ì¹ ë¼`ê³ ì%½ê²œ ì`ëš”ì-`ìš`ë<^ë<x:

1) ì,¬ìš© ì¼€ì `ìšxë³...ì,, ì•`ì•`ê³ ì`ì`ëì,,ì,,ì,,œë,œë””ë %óí,,°ëì¬ `permissioncheck/` ì`ë°ì— ì`ì`ëì,,ìœ¼ëìœ
ë””ë %óí,,°ëì¬ë¼¼ ì¶”ê°€í•`ê³ `permissioncheck/check.php` ë¼¼ ìf^ ì,¬ìš©ìž ì¼€ì `ìšx ì,,œë,œë””ë %óí,,°ëì¬ëìœ
ë³µì,¬í•`ì<ìœì`x.

2) 8ìš,,ë²•ì`ì,,œë,œë””ë %óí,,°ëì¬ ì½ê,° (ê,°ë³,) ê¶œí•œ, 8ìš,,ë²•ì`ì,,œë,œë””ë %óí,,°ëì¬ ì”°ê,° ê¶œí•œ ë° 8ìš,,ë²•ì`
ìœœì¼ ì”°ê,° ê¶œí•œì,, ì•`ì•`ì<ìœì`x. A+`permissioncheck/usecases.bin`+ ì— ì`ëì,,ê³¼ ê¶œí•œì,, ì½œëì ìœ¼ëìœ
êµ¬ë¶,,í•`ì— ì¶”ê°€í•`ì<ìœì`x. ìx,, ëë¶¶ë¶,,ì—ì,,œ ìì°ì<¬í•`ì<ìœì`x, ì•`ì”œ (CR) ê³¼ ìœ^ë,,ìš° (CR+LF) ëš” ì•,,ìš
ì<œì—`ì•`ìš€ ì•šì•`ìšµë<^ë<x.

3) ì,¬ìš©ìž ì¼€ì `ìšxë¼¼ í<°í,xì ì£¼ ë””ë %óí,,°ëì¬ ë,`ë¶€ì` `setup.sh` ì— ì¶”ê°€í•`ì<ìœì`x. ì£¼ í”,,ëìœê,ëž” ë,`ë¶€ì`
ìšxì¬ëì½ìš,ì` ëš`ìš€ëš% ë¶€ë¶,,: copy the line `php) permission_via_php_check ;;` ìx,,ì,, ë³µì,¬í•`ìœê³ (ìf^ ìx,,ì—ì,,œ
•`ì¼ëšœ í•`©ë<^ë<x) ìœìž`ì•`ëš” `php) ë¼¼ (name) ìœ¼ëìœ êµ²`ì•`ì<ìœì`x, ì—¬ê,°ì,,œ name ì€ ìœ,,ì` 1)ì—ì,,œ ì,, íí•
ê²fìž...ë<^ë<x.`

7. "À" "Í...Ì,"

- <https://dev.tiki.org/Permission+Check>
- "æë²," "ê²€ì," ↯
- htaccess
- <https://dev.tiki.org/How+to+avoid+direct+access+of+a+file+µ>