

# TECHNICAL REPORT

ISO/IEC  
TR  
**19791**

First edition  
2006-05-15

---

## Information technology — Security techniques — Security assessment of operational systems

*Technologies de l'information — Techniques de sécurité — Évaluation  
de la sécurité des systèmes opérationnels*

**PDF disclaimer**

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

## Contents

Page

<b>Foreword.....</b>	<b>v</b>
<b>Introduction .....</b>	<b>vi</b>
<b>1 Scope .....</b>	<b>1</b>
<b>2 Normative references .....</b>	<b>1</b>
<b>3 Terms and definitions.....</b>	<b>2</b>
<b>4 Abbreviated terms .....</b>	<b>4</b>
<b>5 Structure of this Technical Report.....</b>	<b>4</b>
<b>6 Technical approach .....</b>	<b>5</b>
<b>6.1 The nature of operational systems .....</b>	<b>5</b>
<b>6.2 Establishing operational system security.....</b>	<b>5</b>
<b>6.3 Security in the operational system life cycle.....</b>	<b>7</b>
<b>6.4 Relationship to other systems .....</b>	<b>9</b>
<b>7 Extending ISO/IEC 15408 evaluation concepts to operational systems .....</b>	<b>9</b>
<b>7.1 Overview .....</b>	<b>9</b>
<b>7.2 General philosophy .....</b>	<b>9</b>
<b>7.3 Operational system assurance.....</b>	<b>11</b>
<b>7.4 Composite operational systems .....</b>	<b>13</b>
<b>7.5 Types of security controls .....</b>	<b>16</b>
<b>7.6 System security functionality .....</b>	<b>17</b>
<b>7.7 Timing of evaluation .....</b>	<b>18</b>
<b>7.8 Use of evaluated products .....</b>	<b>19</b>
<b>7.9 Documentation requirements .....</b>	<b>20</b>
<b>7.10 Testing activities.....</b>	<b>20</b>
<b>7.11 Configuration management .....</b>	<b>21</b>
<b>8 Relationship to existing security standards .....</b>	<b>22</b>
<b>8.1 Overview .....</b>	<b>22</b>
<b>8.2 Relationship to ISO/IEC 15408 .....</b>	<b>23</b>
<b>8.3 Relationship to non-evaluation standards .....</b>	<b>24</b>
<b>8.4 Relationship to Common Criteria development .....</b>	<b>24</b>
<b>9 Evaluation of operational systems .....</b>	<b>24</b>
<b>9.1 Introduction .....</b>	<b>24</b>
<b>9.2 Evaluation roles and responsibilities .....</b>	<b>24</b>
<b>9.3 Risk assessment and determination of unacceptable risks .....</b>	<b>26</b>
<b>9.4 Security problem definition .....</b>	<b>27</b>
<b>9.5 Security objectives .....</b>	<b>27</b>
<b>9.6 Security requirements .....</b>	<b>27</b>
<b>9.7 The system security target (SST).....</b>	<b>29</b>
<b>9.8 Periodic reassessment.....</b>	<b>31</b>
<b>Annex A (normative) Operational system Protection Profiles and Security Targets.....</b>	<b>32</b>
<b>A.1 Specification of System Security Targets .....</b>	<b>32</b>
<b>A.2 Specification of System Protection Profiles .....</b>	<b>39</b>
<b>Annex B (normative) Operational system functional control requirements .....</b>	<b>46</b>
<b>B.1 Introduction .....</b>	<b>46</b>
<b>B.2 Class FOD: Administration .....</b>	<b>48</b>
<b>B.3 Class FOS: IT systems .....</b>	<b>56</b>
<b>B.4 Class FOA: User Assets.....</b>	<b>66</b>